Las Virgenes – Triunfo Joint Powers Authority
4232 Las Virgenes Road, Calabasas, CA 91302
818.251.2100

Call and Notice of Special Meeting of the Governing Board of the
Las Virgenes – Triunfo Joint Powers Authority

A Special Meeting of the Governing Board of the Las Virgenes – Triunfo Joint Powers Authority (JPA) is hereby called, and notice of said Special Meeting is hereby given for **5:00 p.m. on Thursday, March 28, 2019**, at Oak Park Library, 899 Kanan Road, Oak Park, California 91377, to consider the following:

PLEDGE OF ALLEGIANCE

1. Call to Order and Roll Call
2. Special Meeting of March 28, 2019 (Agenda attached)
3. Adjourn

By Order of the Board of Directors
JANNA ORKNEY, Chair

Josie Guzman, CMC
Clerk of the Board

Dated: March 20, 2019

c: Each Director

LAS VIRGENES - TRIUNFO
JOINT POWERS AUTHORITY
AGENDA
899 Kanan Road, Oak Park, CA 91377

Members of the public wishing to address the Las Virgenes-Triunfo Joint Powers Authority (JPA) Board of Directors are advised that a statement of Public Comment Protocols is available from the Clerk of the Board. Prior to speaking, each speaker is asked to review these protocols, complete a speakers' card, and hand it to the Clerk of the Board. Speakers will be recognized in the order the cards are received.

The Public Comments agenda item is presented to allow the public to address the Board on matters not on the agenda. The public may also present comments on matters on the agenda; speakers for agendized items will be recognized at the time the item is called up for discussion.

Materials prepared by the JPA in connection with the subject matter on the agenda are available for public inspection at 4232 Las Virgenes Road, Calabasas, CA 91302. Materials prepared by the JPA and distributed to the Board during this meeting are available for public inspection at the meeting or as soon thereafter as possible. Materials presented to the Board by the public will be maintained as part of the records of these proceedings and are available upon request to the Clerk of the Board.

5:00 PM March 28, 2019

PLEDGE OF ALLEGIANCE

1 CALL TO ORDER AND ROLL CALL

2 APPROVAL OF AGENDA

3 PUBLIC COMMENTS

Members of the public may now address the Board of Directors **ON MATTERS NOT APPEARING ON THE AGENDA**, but within the jurisdiction of the Board. No action shall be taken on any matter not appearing on the agenda unless authorized by Subdivision (b) of Government Code Section 54954.2

4 CONSENT CALENDAR

Matters listed under the Consent Calendar are considered to be routine, non-controversial and normally approved with one motion. If discussion is requested by a member of the Board on any Consent Calendar item, or if a member of the public wishes to comment on an item, that item will be removed from the Consent Calendar for separate action.

A Minutes: Regular Meeting of March 4, 2019: Approve (Pg. 5)

5 ILLUSTRATIVE AND/OR VERBAL PRESENTATION AGENDA ITEMS

A Pure Water Project Las Virgenes-Triunfo: Update

6 ACTION ITEMS

A Heal the Bay's "Bring Back the Beach" Event: Attendance (Pg. 32)

Authorize one Board Member from each agency and the Administering Agent/General Manager to attend the Heal the Bay "Bring Back the Beach" Event at a cost of $600 per person.

B Pure Water Demonstration Project: Call for Bids (Pg. 14)

Approve the issuance of a Call for Bids for the Pure Water Demonstration Project.

C Rancho Solar Generation Project Phase II: Approval of Power Purchase Agreement (Pg. 17)

Pass, approve and adopt proposed Resolution No. 6, making findings, authorizing and approving execution of an energy service contract with Borrego Solar System, Inc.; authorize the Administering Agent/General Manager to execute a Change of Scope for Terra Verde Renewable Partners, LLC, in the amount of $101,283, for services during construction; and appropriate additional reimbursable funding, in the amount of $120,000, for the Rancho Solar Generation Project Phase II.

RESOLUTION NO. 6

A RESOLUTION OF THE GOVERNING BOARD OF THE LAS VIRGENES-TRIUNFO JOINT POWERS AUTHORITY MAKING FINDINGS, AUTHORIZING AND APPROVING EXECUTION OF AN ENERGY SERVICE CONTRACT

(Reference is hereby made to Resolution No. 6 on file in the JPA's Resolution Book and by this reference the same is incorporated herein.)

D Leak on 21-inch Trunk Sewer: Declaration of Emergency (Pg. 138)

Pass, approve and adopt proposed Resolution No. 7, declaring an emergency that requires immediate action without delay to repair a leak on a 21-inch trunk sewer.

RESOLUTION NO. 7

A RESOLUTION OF THE GOVERINING BOARD OF THE LAS VIRGENES-TRIUNFO JOINT POWERS AUTHORITY FINDING THAT AN EMERGENCY WILL NOT PERMIT A DELAY RESULTING FROM A COMPETITIVE SOLICITATION FOR REPAIR OF A 21-INCH TRUNK SEWER ON THE WEST SIDE OF LAS VIRGENES ROAD, SOUTH OF THE CENTRATE TREATMENT FACILITY

(Reference is hereby made to Resolution No. 7 on file in the JPA's Resolution Book and by this reference the same is incorporated herein.)

E Woolsey Fire Facility Repair Project Nos. 1 and 3: Award of Design Contracts (Pg. 142)

Accept the proposal from M6 Consulting Inc.; authorize the Administering Agent/General Manager to execute a professional services agreement, in the amount of $121,380 contingent upon the LVMWD's approval of its share of the cost; and appropriate $46,955 for the JPA's share of the engineering design and support services during construction for the Woolsey Fire Facility Repair Project No. 1.

Accept the proposal from L. Newman Design Group, Inc.; authorize the Administering Agent/General Manager to execute a professional services agreement, in the amount of $122,105 contingent upon the LVMWD's approval of its share of the cost; and appropriate $46,112.25 for the JPA's share of the engineering design and support services during construction for the Woolsey Fire Facility Repair Project No. 3.

F JPA Infrastructure Investment Plan: Fiscal Years 2019-20 through 2023-24 (Pg. 242)

Receive and file the JPA Infrastructure Investment Plan for Fiscal Years 2019-20 through 2023-24.

7 BOARD COMMENTS

8 ADMINISTERING AGENT/GENERAL MANAGER REPORT

9 FUTURE AGENDA ITEMS

10 INFORMATION ITEMS

A State and Federal Legislative Update

11 PUBLIC COMMENTS

Members of the public may now address the Board of Directors **ON MATTERS NOT APPEARING ON THE AGENDA**, but within the jurisdiction of the Board. No action shall be taken on any matter not appearing on the agenda unless authorized by Subdivision (b) of Government Code Section 54954.2

12 CLOSED SESSION

A Conference with Legal Counsel – Existing Litigation (Government Code Section 54956.9(a)):

Zusser Company, Inc. v. Las Virgenes Municipal Water District

13 ADJOURNMENT

Pursuant to Section 202 of the Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12132), and applicable federal rules and regulations, requests for a disability-related modification or accommodation, including auxiliary aids or services, in order to attend or participate in a meeting, should be made to the Executive Assistant/Clerk of the Board in advance of the meeting to ensure availability of the requested service or accommodation. Notices, agendas, and public documents related to the Board meetings can be made available in appropriate alternative format upon request.

LAS VIRGENES – TRIUNFO
JOINT POWERS AUTHORITY
MINUTES
REGULAR MEETING

5:00 PM March 4, 2019

PLEDGE OF ALLEGIANCE

The Pledge of Allegiance to the Flag was led by Jay Lewitt.

1. CALL TO ORDER AND ROLL CALL

The meeting was called to order at **5:00 p.m.** by Chair Orkney in the Conference Room at Las Virgenes Municipal Water District headquarters at 4232 Las Virgenes Road in Calabasas, California. Director Polan participated from the teleconference location at the Brooklyn Public Library, 10 Grand Army Plaza, Brooklyn, New York. Josie Guzman, Clerk of the Board, conducted the roll call.

Present: Directors Caspary, Lewitt, Lo-Hill, Orkney, Pan, Polan, Renger, Shapiro, Tjulander, and Wall.
Absent: None.

Josie Guzman, Clerk of the Board, announced that all action items would require a roll call vote due to the participation of Director Polan by teleconference.

2. APPROVAL OF AGENDA

Administering Agent/General Manager David Pedersen requested that Item 12A be removed from the agenda as there was no update.

Director Caspary moved to approve the agenda with the removal of Item 12A. Motion seconded by Director Tjulander. Motion carried unanimously upon roll call vote.

3. PUBLIC COMMENTS

None.

4. CONSENT CALENDAR

A Minutes: Regular Meeting of February 4, 2019

Approve.

B Budget Planning Calendar for Fiscal Year 2019-20

Receive and file the Budget Planning Calendar for Fiscal Year 2019-20.

Director Lo-Hill moved to approve the Consent Calendar. Motion seconded by Director Shapiro. Motion carried unanimously upon roll call vote.

5. ILLUSTRATIVE AND/OR VERBAL PRESENTATION AGENDA ITEMS

A Pure Water Project Las Virgenes-Triunfo: Visitor Experience

Administering Agent/General Manager David Pedersen provided introductory remarks regarding the visitor experience elements of the project and noted that a new landscape architect, the Urban Water Group, was selected to design the Demonstration Garden.

Tack Roberts, representing ASTOUND, provided a PowerPoint presentation of the proposed visitor experience and messaging, including an overview of the proposed site plan, gray and blue wayfinding signage, garden signage, process building exterior, visitor tour stops, additional 3-D renderings, next steps, and budget summary.

Chair Orkney suggested including a background to the exterior letter signage. She expressed concern with the length of the tour and questioned whether eight stations would be sufficient. She also stated that she would prefer a laboratory sink setting for the tasting area as opposed to a kitchen sink setting.

6. ACTION ITEMS

A Tapia Water Recycling Facility Summer Season Waste Load Allocation Compliance Project: Mitigated Negative Declaration and Preliminary Design Report

Adopt the Mitigated Negative Declaration, including a Mitigation Monitoring and Reporting Program; authorize the Administering Agent/General Manager to file a Notice of Determination with the County Clerk; and receive and file the Preliminary Design Report for the Tapia Water Reclamation Facility Summer Season Waste Load Allocation Compliance Project.

Administering Agent/General Manager David Pedersen presented the report.

Kyleen Marcella, representing Stantec, provided a PowerPoint presentation describing the project drivers stemming from the Tapia Water Reclamation Facility (WRF) permit; project objectives to evaluate alternatives for compliance with Malibu Creek discharge requirements; selected alternative of potable water discharge with ammonia removal; and preliminary design components.

Tyler Hadacek, representing Stantec, continued the PowerPoint presentation, including pipeline alignment alternatives; potable water conveyance mounted to the existing Los Angeles County bridge over Malibu Creek; contractor design basis for ammonia removal bench testing; modifications at Tapia WRF; California Environmental Quality Act (CEQA) mitigation measures; CEQA comments received from various agencies and entities; cost and schedule; and next steps. He responded to questions related to the California Coastal Commission's permitting process; removal of ammonia; chlorine concentration limits; corrosion protection in the final pipeline design; use of the overflow basin in the summer time; and chloride levels in the discharged water.

Director Renger moved to approve Item 6A. Motion seconded by Director Pan. Motion carried unanimously upon roll call vote.

B Rancho Solar Generation Project Phase II: Mitigated Negative Declaration

Adopt the Mitigated Negative Declaration and authorize the Administering Agent/General Manager to file a Notice of Determination with the County Clerk for the Rancho Solar Generation Project Phase II.

John Zhao, Principal Engineer, presented the report. He responded to questions related to mitigating viewshed impacts by increasing the landscaping, solar panel height to allow access for wildlife below and between the solar panels, and allowance for fire truck access.

Administering Agent/General Manager David Pedersen noted there would be no capital investment from the JPA for this project as all costs are reimbursable under a power purchase agreement, and a generating account would be implemented to offset energy usage at multiple benefitting accounts, specifically the Tapia Water Reclamation Facility (WRF).

Mr. Zhao responded to questions related to the setbacks around the perimeter of the site and viewshed impacts. He noted that no complaints were received from neighbors regarding impacts to viewsheds or impacts from the existing non-glare solar panels.

Joel Reeves expressed concern with solar panels producing hazardous waste materials after they are removed from service; possible soil contamination from hazardous waste materials and substances generated from solar panels; and non-

hazardous solar panels ending up in the landfill following their lifespan or from being destroyed after a natural disaster. He inquired whether debris from damaged solar panels could contaminate the soil or the area where they are taken for disposal, and compliance with AB 939 California Integrated Waste Management Act recycling, treatment, and disposal requirements. He asked the Board to postpone making a decision on this project until it is verified that the solar panels do not contain hazardous waste materials or that cadmium would not leach from the solar panels during rainfall.

Erin Reeves expressed concern with the solar panels' designation as hazardous materials; the possibility of cadmium and lead leaching from the solar panels to the soil during rainfall; viewshed impacts; potential fire risks; residents' ability to obtain fire insurance due to proximity to solar panels; impacts to property values; and impacts from electromagnetic field (EMF) exposure. She also expressed concern regarding whether there was sufficient notice provided to schools and the public. She asked the Board to postpone its decision on this project in order to allow for additional public input.

Marie Kamibayashi expressed concern that the solar panels could become damaged and could adversely affect the soil and water supply following an earthquake, and concern with possible carcinogens. She asked the Board to allow discussion and public input regarding this project.

Christina Gibson expressed concern with increasing the number of existing solar panels. She asked the Board to delay a decision in order to allow the community to better understand the project.

Jill Torres expressed concern regarding impacts to her property and to neighboring schools; hazardous materials generated from the solar panels; risk of cadmium leaking into the ground following an earthquake or fire; impacts to neighbors; remedies to property owners following adverse impacts; and health risks. She also expressed concern that there was not sufficient information regarding the production of hazardous waste materials if the solar panels are damaged and after their life span.

Mr. Zhao addressed the questions and noted that solar panels include many components and are not hazardous as a whole. He stated that a production guarantee agreement would require the solar provider to make repairs as soon as possible or incur a large penalty. He noted that solar panels are designed to withstand earthquakes and heavy winds, and the agreement calls for the solar provider to remove and properly dispose of the solar panels following their life cycle. He also noted that a 30-day notice was sent to parties and agencies in accordance with California Environmental Quality Act (CEQA) requirements.

Administering Agent/General Manager David Pedersen addressed the concern regarding notice sent to neighboring residences and schools and stated that the

30-day notice was sent on October 11, 2018, followed by a second notice that was sent to a larger group, including neighboring residents, neighboring schools, and the Las Virgenes Unified School District.

A discussion ensued regarding minimal fire risk from the solar panels due to their low voltage and periodic vegetation maintenance; adding a provision in the agreement that damaged solar panels are to be replaced by a date certain; reduced electrical costs, which could assist in maintaining low water rates; and continuous monitoring and real-time feedback from the solar panels to the solar provider.

Administering Agent/General Manager David Pedersen proposed that the Board consider a motion consisting of the staff recommendation contingent upon bringing back a Power Purchase Agreement at the March 28, 2019 JPA Board meeting that addresses the following three items: 1) damaged and/or broken panels would be replaced within a time certain based on discussions with the solar provider; 2) that soil contamination, if any, is to be remediated upon completion of the project; and 3) that the agreement clearly specify the means of disposal of solar panels in accordance with law and regulations at the time when the project is completed.

Director Lewitt moved to approve Item 6B as recommended by staff. Motion seconded by Director Wall. Motion carried unanimously upon roll call vote.

7. BOARD COMMENTS

Director Lewitt thanked Administering Agent/General Manager David Pedersen for providing a facilities tour for Scott Abrams, Senior Aide to Congressman Brad Sherman and candidate for Los Angeles City Council.

8. ADMINISTERING AGENT/GENERAL MANAGER REPORT

Administering Agent/General Manager David Pedersen reported that approximately 25 people attended the Quarterly Wastewater, Recycled Water, and Watershed Tour on February 9th, which was hosted by Directors Lo-Hill and Tjulander. He also reported that the U.S. Bureau of Reclamation approved the request for a time extension related to the grant in order to produce testing results for the Pure Water Demonstration Project. He noted that a copy of a letter was provided to the Board in response to a Letter to the Editor that was published in *The Acorn* on February 14th.

9. FUTURE AGENDA ITEMS

None.

10. INFORMATION ITEMS

A State and Federal Legislative Update

B Phase 2 White Paper on Tapping into Available Capacity in Existing Infrastructure to Create Water supply and Water quality Solutions: Award

C Pure Water Project Las Virgenes-Triunfo: Preliminary Evaluation of Stormwater Diversion Opportunities

Chair Orkney expressed concern that the report did not include Thousand Oaks as part of the preliminary evaluation of stormwater diversion opportunities. She also inquired regarding the cost per acre foot for the three projects. David Lippman, Director of Facilities and Operations, noted that the costs per acre foot shown in the table for Projects TC-29 and TC-37 were reversed. He also stated that the Ventura County Watershed Protection District manages stormwater for the Thousand Oaks and Oak Park areas, and the agency was contacted to identify projects to be evaluated as part of this study. Chair Orkney suggested that other sites be included, such as the area adjacent to Medea Creek.

Director Polan departed from the teleconference location at 7:11 p.m.

11. PUBLIC COMMENTS

None.

12. CLOSED SESSION – (This item was removed from the agenda)

A Conference with Legal Counsel – Existing Litigation (Government Code Section 54956.9(a)):

Zusser Company, Inc. v. Las Virgenes Municipal Water District

13. ADJOURNMENT

Seeing no further business to come before the Board, the meeting was duly adjourned at **7:19 p.m.**

Janna Orkney, Chair

ATTEST:

Jay Lewitt, Vice Chair

March 28, 2019 JPA Board Meeting

TO: JPA Board of Directors

FROM: General Manager

Subject : Heal the Bay's "Bring Back the Beach" Event: Attendance

SUMMARY:

Each year, the environmental group Heal the Bay holds its "Bring Back the Beach" Event in Santa Monica as one of its key fundraising activities. This year the event will be held on Thursday, May 23, 2019, at the Jonathan Club in Santa Monica. Over the years, JPA Directors have attended the event to build relationships, not only with Heal the Bay, but also with other environmental group representatives attending the function. Previously, the JPA reserved a 10-seat table, but when costs rose from $3,000 to $5,000, it was decided to only send the Chairs of each Board, or their designees. Individual seats for the event are $600.

RECOMMENDATION(S):

Authorize one Board Member from each agency and the Administering Agent/General Manager to attend the Heal the Bay "Bring Back the Beach" Event at a cost of $600 per person.

FISCAL IMPACT:

Yes

ITEM BUDGETED:

Yes

FINANCIAL IMPACT:

Sufficient funds for the event are available in the adopted Fiscal Year 2018-19 JPA Budget. Historically, the expense has been charged to the "Watershed Programs" portion of the JPA's Administration Budget, which is allocated 70.6% to LVMWD and 29.4% to Triunfo Sanitation District.

Prepared by: David W. Pedersen, Administering Agent/General Manager

ATTACHMENTS:

Bring Back the Beach Gala 2019

Heal the Bay

Bring Back the Beach

CELEBRATE ON THE SAND

SAVE THE DATE

MAY 23, 2019

JONATHAN CLUB
SANTA MONICA

HEALTHEBAY.ORG/BBB

March 28, 2019 JPA Board Meeting

TO: JPA Board of Directors

FROM: Facilities & Operations

Subject : Pure Water Demonstration Project: Call for Bids

SUMMARY:

Construction of the Pure Water Demonstration Project is the first major step forward for the future full-scale Pure Water Project Las Virgenes-Triunfo. The demonstration project is intended to serve three functions: (1) educate customers on the efficacy of the treatment process and enhance community awareness/acceptance; (2) test alternative treatment equipment to reduce long-term operating costs for the proposed full-scale project; and (3) train employees in the operation of a membrane treatment facility.

The final plans and specifications for the Pure Water Demonstration Project are now complete. It is appropriate at this time to issue a Call for Bids for construction. A separate Call for Bids for the associated demonstration garden will be recommended for issuance in the spring, when plans and specification for that portion of the work will be completed.

RECOMMENDATION(S):

Approve the issuance of a Call for Bids for the Pure Water Demonstration Project.

FISCAL IMPACT:

No

ITEM BUDGETED:

Yes

FINANCIAL IMPACT:

There is no financial impact with the issuance of a Call for Bids. The total estimated cost of the project is $2,925,316. The JPA has received the following grants for the project: (1) a $300,000 grant from the U.S. Bureau of Reclamation, (2) a $34,575 grant from Metropolitan Water District of Southern California (MWD), and (3) a $925,720 grant from the State Coastal Conservancy. Additionally, the JPA applied for a $893,240 grant from the State Water Resources Control Board, which is currently being considered.

Following is a summary of the estimated total project cost:

Architectural, civil and mechanical	$1,510,532
Equipment purchases	$694,846
Visitor experience fabrication	$154,000
Demonstration garden	$300,000
Subtotal	$2,659,378
10% Contingency	$265,938
TOTAL	**$2,925,316**
BOR Grant	($300,000)
MWD Grant	($34,575)
Coastal Conservancy Grant	($925,720)
SWRCB Grant (under review)	($893,249)
Total Potential Grants	($2,153,544)
Estimated Net Project Cost*	**$771,772**

*assuming award of the SWRCB Grant

DISCUSSION:

Most agencies that have undertaken indirect potable reuse projects in California have constructed and operated a pilot or demonstration project before proceeding to full-scale. These projects can vary in size and generally have three goals: (1) treatment technique validation and research; (2) public outreach/acceptance, and (2) operator training. The JPA shares these goals for its proposed Pure Water Demonstration Project.

A Preliminary Design Report (PDR) for the project was presented to the JPA Board on July 10, 2017, and the Board determined that the project was exempt from the requirements of the California Environmental Quality Act on September 5, 2017. The PDR envisioned a 100-gallon-per-minute (gpm) facility housed in Building No. 1 using micro-filtration, reverse osmosis, ultraviolet (UV) light disinfection and advanced oxidation. The old boardroom in Building No. 1 was to proposed to be converted into a "learning center" where the public tours would begin and end. The tours were to follow the treatment process where the last stop would be a tasting station. Signage, interactive displays and visual explanations of the processes and science of potable reuse were to be used to enhance the visitor experience.

On December 4, 2017, New Water ReSources gave a presentation to the JPA Board outlining a preliminary vision for the visitor experience associated with the Pure Water Demonstration Project. The Board provided feedback that included direction to use the existing Boardroom and restrooms in the Headquarters building for the public tours rather than creating these spaces in Building No. 1. The consensus of the Board was to reduce the overall footprint of the facility to reduce cost, while still meeting the goals of treatment validation, operator training and public outreach.

On February 5, 2018, the Board selected Carollo Engineers to provide design and project delivery services for the demonstration project. The phrase "THINK BIG, BUILD SMALL" characterized Carollo's recommended approach, which was a factor in their selection. Rather than constructing a 100-gpm facility, Carollo suggested a smaller facility that would still meet the goals of public outreach, treatment technique validation and operator training, while reducing the overall costs and shortening the schedule. The facility is sized with the

microfiltration process at 60 to 80 gpm, reverse osmosis at 30 gpm and the UV disinfection/advanced oxidation at 10 gpm.

Following several workshops with the Board, the project layout and elements of the visitor experience were finalized. Final design was completed with the exception of the portion related to the proposed demonstration garden. The design of the demonstration garden is underway and expected to be completed this spring; a separate construction contract is proposed for this portion of the work.

Final plans and specifications for the architectural, civil and mechanical work are complete and will be advertised to solicit competitive bids for the construction work. The contract will include installation of owner-furnished equipment, which was pre-purchased by the JPA. Staff will return to the Board in July with a recommendation for award of a construction contract to the lowest responsible bidder. A separate recommendation for award of a professional services agreement for the final design and fabrication of the visitor experience elements will be brought to the Board in the coming months.

The project is expected to be completed by December 2019, providing for tours to begin early next year. The U.S. Bureau of Reclamation grant includes conducting testing and validating the performance of the treatment equipment. The deadline to complete this work is November 2020. The MWD grant provides for testing the application of machine learning and artificial intelligence to the project, seeking predictive rather than reactive control changes. If successful, this technology could be applied to the full-scale project and potentially result in significant cost-savings.

Following is the proposed bidding schedule:

Call for Bids	March 28, 2019
Mandatory Pre-bid meeting	April 8, 2018
Open Bids	May 15, 2019
Award	July 1, 2019

Prepared by: David R. Lippman, P.E., Director of Facilities and Operations

March 28, 2019 JPA Board Meeting

TO: JPA Board of Directors

FROM: Facilities & Operations

Subject : Rancho Solar Generation Project Phase II: Approval of Power Purchase Agreement

SUMMARY:

On March 5, 2018, the JPA Board approved a professional services agreement with Terra Verde Renewable Partners, LLC (Terra Verde) to develop a Request For Proposals (RFP) and solicit proposals for a 4-megawatt solar project in the north canyon of the Rancho Las Virgenes Farm. On November 15 2018, a total of eight competitive power purchase proposals were received. After evaluating all of the proposals received, staff initiated negotiations with Borrego Solar System, Inc. for a 4-megawatt solar Power Purchase Agreement (PPA) that would enable the JPA to purchase solar power at 5.295 cents per kilowatt-hour (kWh) with a 0% annual escalation rate for 25 years.

The PPA includes a Cost Reimbursement Agreement that provides for Borrego Solar to reimburse all of the past, current and future JPA project implementation-related costs, including consultant fees, SCE interconnection charges and project mitigation costs. The PPA includes a License Agreement that enables Borrego Solar to use approximately 20 acres of the Rancho site for construction, operations and maintenance associated with the 4-megawatt solar project.

In addition, the PPA includes terms to address concerns that were raised by the public during the JPA Board's consideration of the Mitigated Negative Declaration for the project on March 4, 2019. Specifically, the terms address concerns with the following items: (1) expeditious replacement of broken or damaged solar panels; (2) remediation of any soil contamination; and, (3) proper disposal of solar panels at the end of the project.

RECOMMENDATION(S):

Pass, approve and adopt proposed Resolution No. 6, making findings, authorizing and approving execution of an energy service contract with Borrego Solar System, Inc.; authorize the Administering Agent/General Manager to execute a Change of Scope for Terra Verde Renewable Partners, LLC, in the amount of $101,283, for services during construction; and appropriate additional reimbursable funding, in the amount of $120,000, for the Rancho Solar Generation Project Phase II.

RESOLUTION NO. 6

A RESOLUTION OF THE GOVERNING BOARD OF THE LAS VIRGENES-TRIUNFO

JOINT POWERS AUTHORITY MAKING FINDINGS, AUTHORIZING AND APPROVING EXECUTION OF AN ENERGY SERVICE CONTRACT

(Reference is hereby made to Resolution No. 6 on file in the JPA's Resolution Book and by this reference the same is incorporated herein.)

FISCAL IMPACT:

Yes

ITEM BUDGETED:

Yes

FINANCIAL IMPACT:

The proposed PPA rate of 5.295 cents/kWh, as compared to the blended energy generation components of the SCE accounts that will be the beneficiaries of the bill credits produced by the solar facility at 8.570 cents/kWh, will result in an estimated total cost-savings to the JPA of approximately $10.3 million over 25 years. The cost-savings includes a one-time bill credit of approximately $931,789 to compensate the JPA for projected savings lost due to the implementation of the CPUC-approved peak hour shift from 12 noon through 6:00 p.m., to 4:00 p.m. through 9:00 p.m. An additional reimbursable appropriation, in the amount of $120,000, is required for the support services during construction.

DISCUSSION:

The proposed Power Purchase Agreement (PPA) with Borrego Solar System, Inc., dba Las Virgenes Solar, LLC (LVS) provides for LVS to invest the capital to build, operate and maintain a 4-MW single-axis tracker solar array connected to the SCE distribution system. The JPA will purchase the power generated by the project at a rate of 5.295 cents per kWh with no escalation for a 25-year period with up to two (2) five-year renewal terms. The JPA will have the option to purchase the project based on listed or fair market value shown in Exhibit D of the PPA. Additionally, a Performance Guarantee Agreement was drafted to provide the JPA with assurance of the guaranteed energy production over the 25-year period, regardless of the actual performance of the solar project. The Performance Guarantee Agreement provides for LVS to compensate the JPA for any shortfalls between the actual and contractual amounts of solar energy produced. A License Agreement provides terms and conditions for LVS to use the JPA site to fulfill its PPA obligations to construct, operate and maintain the proposed 4-MW solar system.

During the JPA Board's consideration of the Mitigated Negative Declaration for the project on March 4, 2019, the public raised several concerns that are addressed by terms included in the PPA. Specifically, the terms address concerns with the following items: (1) expeditious replacement of broken or damaged solar panels; (2) remediation of any soil contamination; and, (3) proper disposal of solar panels at the end of the project. Section 9 of the License Agreement address the concerns of hazardous substances from broken solar panels and hazardous waste generation introduced by the proposed project on the property. Section 3 of the PPA addresses the proper disposal of solar panels at the end of the Agreement.

California Government Code Sections 4217.10 to 4217.18 allows public agencies to enter into energy service contracts without using a formal competitive bid process. To comply with the provisions of statute, the JPA Board must fulfill the following two requirements:

1. Hold a regularly scheduled public hearing on the Power Purchase Agreement where public notice must be given at least two weeks prior. The notice of the public hearing was posted on Thursday, March 14, 2019.
2. Find that the anticipated cost to the JPA for thermal or electrical energy or conservation services provided by the project under the PPA will be less than the anticipated marginal cost to the JPA of thermal, electrical or other energy that would have been consumed in the absence of those purchases. The Cash Savings Pro Forma prepared by Terra Verde (Exhibit 1 to proposed Resolution No. 6) supports this finding.
3. Find that the difference between the fair market value for the real property subject to the solar facility license agreement is anticipated to be offset by below-market energy purchases or other benefits provided under the energy services.

At the request of staff, Terra Verde also submitted a proposal, in the amount of $101,283, to provide services during the implementation and construction of the PPA. The proposed services will take the project from kickoff to facility startup with an update of project pro-forma based on actual project power production once the facility is operational. The cost is reimbursable based on the Cost Reimbursement Agreement of the PPA.

JPA Legal Counsel reviewed and approved the PPA and all of its attached exhibits as to form. The PPA is ready for approval by the JPA Board.

Prepared by: John Zhao. P.E., Principal Engineer

ATTACHMENTS:

Proposed Resolution No. 6
Power Purchase Agreement
Terra Verde Proposal

RESOLUTION NO. 6

A RESOLUTION OF THE GOVERNING BOARD OF THE LAS VIRGENES-TRIUNFO JOINT POWERS AUTHORITY MAKING FINDINGS, AUTHORIZING AND APPROVING EXECUTION OF AN ENERGY SERVICE CONTRACT

WHEREAS, it is the policy of the State of California and the intent of the State Legislature to promote all feasible means of energy conservation and all feasible uses of alternative energy supply sources; and

WHEREAS, Las Virgenes-Triunfo Joint Powers Authority ("JPA") desires to reduce the steadily rising costs of meeting the energy needs at its facilities; and

WHEREAS, Government Code section 4217.12(a)(1) authorizes a public agency to enter into an energy service contract with respect to an energy conservation facility on terms that the public agency's governing board determines are in the best interests of the public agency and if the governing board finds that the anticipated cost to the public agency for the energy provided by the energy conservation facility will be less than the anticipated marginal cost to the JPA of thermal, electrical or other energy that would have been consumed by the JPA in the absence of those purchases, and that the difference between the fair rental value for the real property subject to the solar facility license agreement and the agreed rent is anticipated to be offset by below-market energy purchases or other benefits provided under the energy service contract; and

WHEREAS, TerraVerde Energy, LLC ("TerraVerde"), has provided the JPA with analysis showing the benefits of implementing certain energy conservation measures through the installation of a photovoltaic energy generating facility, and TerraVerde's analysis ("Analysis") is attached hereto as Exhibit A and made part hereof by this reference; and

WHEREAS, the JPA proposes to enter into power purchase agreements and related contract documents ("Power Purchase Agreement") and Cost Reimbursement Agreement with Borrego Solar ("Company"), pursuant to which Company will design, construct, install, maintain, and operate on the JPA property certain energy saving improvements consisting of a solar photovoltaic facility and will arrange with the local utility for interconnection of the facility, which will generate energy for the benefit of the JPA's operations ("Project"); and

WHEREAS, the solar facility will be located at 3810 Las Virgenes Road, Calabasas, CA; and

WHEREAS, Company has analyzed the energy needs of the site and has represented that provision of the solar photovoltaic facility on the site will result in a reduction in consumption of or demand for nonrenewable energy that will result in net cost savings to the JPA ("Cost Savings"); and

WHEREAS, the Analysis includes data showing that the anticipated cost to the JPA for the electrical energy provided by the Project will be less than the anticipated marginal cost to the JPA of electrical energy that would have been consumed in the absence of those purchases; and

WHEREAS, the Board proposes to enter into a Power Purchase Agreement for each site listed above, and the Cost Reimbursement Agreement substantially in the form presented at this meeting, subject to such changes, insertions or omissions as the JPA's Administering Agency General Manager ("General Manager") or designee reasonably deems necessary following the Board's adoption of this Resolution; and

WHEREAS, pursuant to Government Code section 4217.12, on March 28, 2019, the Board has held a public hearing at a regularly scheduled Board meeting, with respect to the JPA entering into an energy service contract, public notice of which was posted at least two weeks in advance, to receive public comment; and

WHEREAS, based upon the reports and analysis presented**,** the anticipated cost to the JPA for solar energy that is generated by the photovoltaic energy generating facility will be less than the anticipated marginal cost to the JPA of thermal, electrical, or other energy that would have been consumed in the absence of the photovoltaic energy generating facility; and

WHEREAS, the JPA desires to enter into the Power Purchase Agreements and Cost Reimbursement Agreement, which Company would provide, design and install the photovoltaic energy generating facility pursuant to the terms and conditions of the Power Purchase Agreements.

NOW, THEREFORE, based upon the above-referenced recitals, the Board hereby finds, determines and orders as follows:

1. The above recitals are true and correct.

2. In accordance with Government Code section 4217.12, and based on data provided by the Analysis, the Board finds that the anticipated cost to the JPA for electrical energy provided by the Project under the Power Purchase Agreements will be less than the anticipated marginal cost to the JPA of electrical energy that would have been consumed in the absence of those purchases, and that the difference between the fair rental value for the real property subject to the solar facility ground license agreement and the agreed rent is anticipated to be offset by below-market energy purchases or other benefits provided under the energy service contract.

3. In accordance with Government Code section 4217.12 and based upon all available information reviewed by the Board in connection herewith, the Board finds that the terms of the Power Purchase Agreements are in the best interests of the JPA.

4. The Board hereby approves the Power Purchase Agreements for each site, and the Cost Reimbursement Agreement, all of which shall be subject to such changes,

insertions or omissions as the General Manager or their designee reasonably deems necessary.

5. The General Manager or designee is hereby authorized and directed to negotiate any further changes, insertions and omissions to the Power Purchase Agreements and Cost Reimbursement Agreement as they reasonably deems necessary, and thereafter to execute and deliver the Power Purchase Agreements and Cost Reimbursement Agreement following the Board's adoption of this Resolution. The General Manager or designee is further authorized and directed to execute and deliver any and all papers, instruments, opinions, certificates, affidavits and other documents and to do or cause to be done any and all other acts and things necessary or proper for carrying out this resolution and said agreements.

The foregoing Resolution was adopted, signed, and approved at a meeting of the Governing Board of the Las Virgenes-Triunfo Joint Powers Authority on March 28, 2019, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

_____
Janna Orkney, Chair

ATTEST:

_____
Jay Lewitt, Vice Chair

APPROVED AS TO FORM:

_____
Legal Counsel

ANALYSIS OF BENEFITS

[Attached]

Cash Flow

TerraVerde ENERGY

Project: Las Virgenes Water District
Scenario: #1 - RES-BCT: Power Purchase Agreement

Term	Electricity		Utility Savings		Expenses			Net Savings		Additional Revenue		Cash Position	
Year	Annual Solar Production (kWh)	Solar Savings per kWh Produced	Savings from Solar	**Subtotal: Annual Gross Benefits**	PPA Payments	Asset Management Service	**Subtotal: Annual Operating Expenses**	Net Benefits (Solar)	**Cumulative Net Benefits**	Renewable Energy Certificates (RECs)	Estimated Res-BCT Indifference Payment	**Cumulative Cash Position**	Term
2019	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	0
2020	8,223,502	$ 0.0857	$ 704,597	$ 704,597	$ (434,201)	$ (41,118)	$ (475,318)	$ 229,279	$ 229,279	$ (400)	$ -	$ 228,879	1
2021	8,182,385	$ 0.0891	$ 729,117	$ 729,117	$ (432,030)	$ (42,351)	$ (474,381)	$ 254,736	$ 484,015	$ 28,925	$ 931,789	$ 1,444,328	2
2022	8,141,473	$ 0.0927	$ 754,491	$ 754,491	$ (429,870)	$ (43,622)	$ (473,491)	$ 280,999	$ 765,014	$ 29,068	$ -	$ 1,754,396	3
2023	8,100,765	$ 0.0964	$ 780,747	$ 780,747	$ (427,720)	$ (44,930)	$ (472,651)	$ 308,096	$ 1,073,111	$ 29,212	$ -	$ 2,091,704	4
2024	8,060,262	$ 0.1002	$ 807,917	$ 807,917	$ (425,582)	$ (46,278)	$ (471,860)	$ 336,057	$ 1,409,167	$ 29,356	$ -	$ 2,457,117	5
2025	8,019,960	$ 0.1042	$ 836,032	$ 836,032	$ (423,454)	$ (47,666)	$ (471,120)	$ 364,912	$ 1,774,079	$ 29,102	$ -	$ 2,851,130	6
2026	7,979,861	$ 0.1084	$ 865,126	$ 865,126	$ (421,337)	$ (49,096)	$ (470,433)	$ 394,693	$ 2,168,773	$ 29,648	$ -	$ 3,275,471	7
2027	7,939,961	$ 0.0768	$ 609,631	$ 609,631	$ (419,230)	$ (50,569)	$ (469,799)	$ 139,832	$ 2,308,604	$ 29,794	$ -	$ 3,445,097	8
2028	7,900,261	$ 0.0799	$ 630,846	$ 630,846	$ (417,134)	$ (52,086)	$ (469,220)	$ 161,626	$ 2,470,230	$ 29,942	$ -	$ 3,636,665	9
2029	7,860,760	$ 0.0830	$ 652,799	$ 652,799	$ (415,048)	$ (53,649)	$ (468,697)	$ 184,102	$ 2,654,332	$ 30,090	$ -	$ 3,850,857	10
2030	7,821,456	$ 0.0864	$ 675,517	$ 675,517	$ (412,973)	$ (55,258)	$ (468,231)	$ 207,285	$ 2,861,617	$ 29,839	$ -	$ 4,087,982	11
2031	7,782,349	$ 0.0898	$ 699,025	$ 699,025	$ (410,908)	$ (56,916)	$ (467,824)	$ 231,201	$ 3,092,818	$ 30,389	$ -	$ 4,349,571	12
2032	7,743,437	$ 0.0934	$ 723,351	$ 723,351	$ (408,853)	$ (58,624)	$ (467,477)	$ 255,874	$ 3,348,692	$ 30,539	$ -	$ 4,635,984	13
2033	7,704,720	$ 0.0972	$ 748,523	$ 748,523	$ (406,809)	$ (60,382)	$ (467,192)	$ 281,332	$ 3,630,023	$ 30,690	$ -	$ 4,948,006	14
2034	7,666,196	$ 0.1010	$ 774,572	$ 774,572	$ (404,775)	$ (62,194)	$ (466,969)	$ 307,603	$ 3,937,626	$ 30,842	$ -	$ 5,286,452	15
2035	7,627,865	$ 0.1051	$ 801,527	$ 801,527	$ (402,751)	$ (64,060)	$ (466,811)	$ 334,716	$ 4,272,343	$ 30,595	$ -	$ 5,651,763	16
2036	7,589,726	$ 0.1093	$ 829,420	$ 829,420	$ (400,738)	$ (65,982)	$ (466,719)	$ 362,701	$ 4,635,044	$ 31,148	$ -	$ 6,045,613	17
2037	7,551,778	$ 0.1137	$ 858,284	$ 858,284	$ (398,734)	$ (67,961)	$ (466,695)	$ 391,589	$ 5,026,633	$ 31,303	$ -	$ 6,468,505	18
2038	7,514,019	$ 0.1182	$ 888,152	$ 888,152	$ (396,740)	$ (70,000)	$ (466,740)	$ 421,412	$ 5,448,046	$ 31,458	$ -	$ 6,921,375	19
2039	7,476,449	$ 0.1229	$ 919,060	$ 919,060	$ (394,756)	$ (72,100)	$ (466,856)	$ 452,204	$ 5,900,250	$ 31,613	$ -	$ 7,405,192	20
2040	7,439,066	$ 0.1278	$ 951,043	$ 951,043	$ (392,783)	$ (74,263)	$ (467,046)	$ 483,998	$ 6,384,247	$ 31,370	$ -	$ 7,920,560	21
2041	7,401,871	$ 0.1330	$ 984,140	$ 984,140	$ (390,819)	$ (76,491)	$ (467,309)	$ 516,830	$ 6,901,078	$ 31,927	$ -	$ 8,469,317	22
2042	7,364,862	$ 0.1383	$ 1,018,388	$ 1,018,388	$ (388,865)	$ (78,785)	$ (467,650)	$ 550,738	$ 7,451,816	$ 32,085	$ -	$ 9,052,140	23
2043	7,328,037	$ 0.1438	$ 1,053,828	$ 1,053,828	$ (386,920)	$ (81,149)	$ (468,069)	$ 585,758	$ 8,037,574	$ 32,244	$ -	$ 9,670,142	24
2044	7,291,397	$ 0.1496	$ 1,090,501	$ 1,090,501	$ (384,986)	$ (83,583)	$ (468,569)	$ 621,932	$ 8,659,506	$ 32,403	$ -	$ 10,324,477	25
	193,712,419		**$ 20,386,636**	**$ 20,386,636**	**$ (10,228,016)**		**$ (11,727,130)**	**$ 8,659,506**	**$ 8,659,506**	**$ 733,183**	**$ 931,789**	**$ 10,324,477**	

Disclaimers and Assumptions

TerraVerde ENERGY

1) Projections of future savings are calculated based on patterns of previous electricity usage with billing data from July 2017 through July 2018, and assume that historical usage patterns hold at the same level over the life of the project.

2) Projections based on stated assumptions. Final solar project size and costs will be based on RFP results.

3) Analysis includes rate schedules provided in SCE grandfathered and new time of use settlement agreements.

4) Projections are subject to tariff eligibility over the life of the installation.

5) PPA rate includes repayment of client project development costs.

6) TOU period grandfathering starts at system PTO (estimated to be 12/31/2019), and ends 12/31/2026.

7) PPA rate includes SCE's estimated interconnection facilities upgrades of $251,494, and one-time lump sum 20yr interconnection facilities O&M cost of $147,062.

8) Benefitting account SAIDs 3000436860 and 3031816954 are grandfathered under current time-of-use structure for optimized savings in addition to the generation meter. All other benefitting account SAIDs are omitted from time-of-use grandfathering.

9) Standby charges for the generation account meter are assumed based on estimated maximum annual demand of 40kW.

10) Projections include SCE's RES-BCT one-time lump sum indifference payment based on the first year's actual energy production, and calculated per SCE's RES-BCT Indifference Mechanism Amended Settlement Agreement (Sept 2018).

11) This analysis is based on using TOU-GS-2-R rate schedule for grandfathering period from permission to operate date up to and including year 2026; and TOU-GS-2-E for new TOU rate schedule starting from year 2027 per the rates provided in SCE settlement General Rate Case documents. All rates are using the 2-50kV voltage level.

SOLAR POWER PURCHASE AGREEMENT

by and between

LAS VIRGENES SOLAR 1, LLC

and

LAS VIRGENES – TRIUNFO JOINT POWERS AUTHORITY

dated

_____, 2019

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SOLAR POWER PURCHASE AGREEMENT

This Solar Power Purchase Agreement ("Agreement" or "PPA") is made and entered into as of this ___ day of _____, 2019, ("Effective Date"), between LAS VIRGENES SOLAR 1, LLC ("Provider"), and the Las Virgenes-Triunfo Joint Powers Authority ("JPA"). JPA and Provider are collectively referred to herein as "Parties" and individually as "Party."

RECITALS

WHEREAS, JPA desires to reduce its energy costs as well as its dependence on fossil fuel electric generating resources and to promote the generation of electricity from solar photovoltaic facilities; and

WHEREAS, Provider is in the business of installing and operating solar power facilities and selling electric energy generated from such facilities;

WHEREAS, Government Code section 4217.10 *et seq.* provides that public agencies may enter into agreements for real property upon which alternative energy facilities may be constructed so that the public agency may purchase the energy generated from the facilities constructed on the real property under a power purchase agreement; and

WHEREAS, the governing body of the JPA has made those findings required by Section 4217.12 of the Government Code that: (1) the anticipated cost to the JPA for electrical energy services provided by the solar panel system under this Agreement will be less than the anticipated marginal cost to the JPA of electrical energy that would have been consumed by the JPA in the absence of those purchases; and (2) the difference, if any, between the fair market value of the right to access and occupy the real property subject to this Agreement and related payments under this Agreement, if any, is anticipated to be offset by below-market energy purchases or other benefits provided under this Agreement; and

WHEREAS, Provider desires to design, install, own, maintain, and operate each photovoltaic system including all solar panels and equipment components of the solar system (the "Solar Facility") on the Site owned by the JPA, and Provider shall sell the output from the Solar Facility to JPA at the rate set forth herein (collectively the "Project");

WHEREAS, Provider has conducted due diligence relating to the property upon which the photovoltaic system(s) shall be installed and operated, including physical inspections and site surveys, geotechnical work, real estate zoning, and necessary switchgear upgrades. Provider has analyzed the aforementioned items and any additional due diligence necessary and included these costs into the Power Price as set forth herein, except for any latent, unknown, or unforeseen issues or conditions which differ materially from the documented site conditions; and

WHEREAS, Provider has developed an ownership and financing structure for the Solar Facility, which facilitates the use of certain tax incentives, and accelerated depreciation to reduce the expected investment returns of its investors, and which benefits JPA by offering a competitive Power Price, as defined herein; and

WHEREAS, Provider and an affiliate of JPA, Las Virgenes Municipal Water District ("LVMWD"), will be entering into a license agreement substantially in the form of Exhibit H following the date hereof (the "License Agreement"), pursuant to which LVMWD shall grant a license to Provider for the sole purpose of accessing LVMWD's property to install, operate, maintain, and repair a photovoltaic system; and

WHEREAS, as part of this PPA and in consideration of the License Agreement, Provider and JPA intend that Provider would obtain title, an ownership interest, and retain all financial incentives and tax benefits generated by the solar panel system and associated with the development of solar photovoltaic system, including the installation, ownership, and operation of the solar panel system and the sale of energy from the system to the JPA.

NOW, THEREFORE, in consideration of the promises and the mutual benefits from the covenants hereinafter set forth, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound, Provider and JPA hereby agree as follows:

AGREEMENT

1. Definitions.

Capitalized terms used in this Agreement shall have the meanings ascribed to them herein or in the attached Exhibit A.

2. Term.

A. Term. The term of this Agreement shall commence upon the Effective Date and terminate automatically on the Expiration Date ("Initial Term"), unless terminated earlier as provided herein. The Parties may agree, in a writing signed by both Parties, to renew this Agreement for up to two (2) five-year renewal terms ("Renewal Term"). The Initial Term and all subsequent Renewal Terms are referred to collectively as "Term." This Agreement shall terminate automatically and concurrently with any termination of the License Agreement.

3. Removal of Solar Facility

A. Removal of Solar Facility. Within one hundred twenty (120) days of the expiration or any termination of this Agreement (unless JPA has: (i) purchased the Solar Facility under the terms of this Agreement; or (ii) otherwise consented in writing to allowing the Solar Facility to remain installed on the Site), Provider shall, in coordination with JPA and at Provider's sole cost and expense, remove the Solar Facility from the Site. Provider shall bear the cost of any required storage of the Solar Facility if necessary during Provider's removal of the Solar Facility. Provider shall dispose of all solar panels in a manner consistent with Applicable Law. For the avoidance of doubt, JPA shall bear the costs of removing the Solar Facility from the Site if such removal results from termination of the Agreement due to JPA default.

B. Removal and Site Restoration. Removal of the Solar Facility shall include the removal of all installed equipment, including, but not limited to, the Solar Facility and all tangible and structural support materials, as well as all appurtenant equipment, above and below ground (except for empty conduits). For the avoidance of doubt, Provider shall remove Solar Facility

posts (which includes the removal of concrete bollards and rebar cages above grade). Provider shall additionally restore the Site to a condition substantially similar to the better of (a) the pre-installation condition of the Site or (b) the conditions of the Site upon the Commercial Operation Date, excluding ordinary wear and tear, through reasonable efforts. Provider's restoration of the Site shall include, but is not limited to, any refinishing, landscaping, hardscaping, painting, or other finish work, and cleaning. Provider shall undertake any repairs necessary as a result of such removal and restoration. The parties shall reasonably coordinate all such removal, restoration, storage, and transportation activities and dates.

C. Failure to Remove. If Provider fails to remove the Solar Facility and restore the Site as required under Section 3A, JPA shall have the right, but not the obligation, to remove the Solar Facility and restore the Site and charge Provider for the cost incurred by JPA, which cost shall include a twenty percent (20%) administrative fee. The Parties shall reasonably coordinate all such removal and pick-up activities. In the event that the Provider does not remove the Solar Facility as specified herein, JPA shall have the option to receive Output from the Solar Facility, at no cost to JPA, until the Solar Facility is removed by either Provider or JPA. The provisions of this Section 3C shall not be interpreted to limit the JPA's other available lawful remedies.

4. Purchase and Sale of Output.

A. Purchase and Sale of Output. Beginning on the Commercial Operation Date and through the remainder of the Term, Provider agrees to sell and JPA agrees to buy all of the Output from the Solar Facility at the applicable "Power Price" as set forth in Exhibit B. JPA shall have no obligation to pay for Output delivered from the Solar Facility after the expiration date of this Agreement or the early termination thereof.

B. Provider's Output Guarantee. In the first (1st) Contract Year, the aggregate metered Output from the Solar Facility shall be one hundred percent (100%) of the aggregate Annual Production Estimate for the Solar Facility as set forth in Exhibit F (the "Year 1 Output Guarantee"). Commencing with the second (2nd) Contract Year after the Commercial Operation Date of the Solar Facility, and for such Contract Year thereafter during the Initial Term, the aggregate metered Output from the Solar Facility for the previous four (4) Contract Years (the "Measurement Period") shall be at least ninety-five percent (95%) of the aggregate Annual Production Estimate for such Measurement Period for the Solar Facility (the "Term Output Guarantee", and together with the Year 1 Output Guarantee, the "Output Guarantee"), as further described in Exhibit F; *provided,* the Output Guarantee for any Measurement Period (or, with respect to the Year 1 Output Guarantee, the first Contract Year) will be reduced by the estimated generation of the Project that would have been generated during such Measurement Period, but was not generated, due to one or more of the following causes: (a) an Outage; (b) the actions or omissions of the Distribution Utility or the request or direction of the Distribution Utility, or any other curtailment, reduction or adjustment to the Solar Facility, or failure of the Solar Facility to perform, caused by legislative, administrative or executive action, regulation, order or requisition, or any other action of any federal, state or local government, local utility or public utilities commission; (c) a Force Majeure event; (d) foliage or trees, or buildings or structures constructed after the Commercial Operation Date overshadowing or otherwise blocking access or sunlight to the Project or any other interference with Insolation on or at the Site; (e) a breach of this Agreement by JPA; (f) vandalism, theft, or criminal activity that is attributable to (1) the active negligence or willful misconduct of JPA, its officers, employees, or agents, or (2) the

failure of JPA to perform its obligations set forth in Section 5(E) with respect to the fencing on the Site; (g) unauthorized or unexpected usage by JPA of the Site, or buildings at or near the Site, which may affect building permits, site permits and related requirements for the operation of the Solar Facility; or (h) only with respect to the Term Output Guarantee, conditions where (1) the annual Insolation Data, averaged over a Measurement Period, is less than the Threshold Insolation measured over such Measurement Period or (2) the annual Temperature Data, averaged over a Measurement Period, is greater than the Threshold Ambient Temperature measured over such Measurement Period. For the avoidance of doubt, in event of cause (h), the Term Output Guarantee will be adjusted for the applicable Measurement Period by revising the Reference Model to substitute the annual Insolation Data and Temperature Data for each Contract Year during such Measurement Period, thus yielding a revised Annual Production Estimate for each Contract Year. The Parties acknowledge and agree that the reference values included in the definitions for Threshold Insolation and Threshold Ambient Temperature are fixed for the Term of the Agreement, and any changes to these reference values should be mutually agreed to between the Parties.

If the Output delivered by the Solar Facility during any Measurement Period does not equal or exceed the Output Guarantee for such Measurement Period, Provider shall include in its next invoice(s) to JPA (and in the final invoice for any credit owed for the final Contract Year) a credit for the Energy Shortfall Amount. Alternatively, the JPA has the option to request that the Energy Shortfall Amount be paid by check independently of an invoice. For the avoidance of doubt, during any applicable Measurement Period, any monies paid by Provider to the JPA under Section 4(E) and/or Section 11(E) shall be credited towards the applicable Energy Shortfall Amount.

C. Resale of Output. If at any time during the Term, JPA reduces its demand load requirements for Output or otherwise determines that the Distribution Utility or any other purchaser is willing to purchase Output from the Solar Facility at a rate in excess of the Power Price, JPA, at its option, may sell Output to the Distribution Utility or any other purchaser. If applicable and required by law, JPA may also request that Provider enter into negotiations with JPA to pursue a third-party sale agreement. Upon such request, Provider and JPA shall negotiate in good faith regarding the terms and conditions of the third-party sale agreement.

D. Net Metering, Credits, and Storage of Output. Nothing in this Agreement shall limit the JPA's ability during the Term to participate in or otherwise take advantage of any current or future program or technology which may enable JPA to store Output at any Site or to export Output to any other JPA site or to the Distribution Utility for any available energy credits or offsets. The JPA will give reasonable notice to Provider of its intention to undertake any such project or program and will coordinate with the Provider to ensure that the Solar Facility, the terms and conditions of this Agreement, and all associated warranties are preserved.

E. Outages. Provider may suspend delivery of Output as reasonably necessary for testing, maintaining, replacing, and repairing the Solar Facility, or in response to any Distribution Utility directive or dispatch order (an "Outage"). Provider shall take all steps necessary to minimize the duration and scope of any such Outage. In the event that an Outage is caused or prolonged by Provider's negligent act or omission, Provider shall compensate JPA for the difference between the electricity cost as provided by the Distribution Utility to the JPA for the applicable period of Outage caused or prolonged by Provider's negligent act or omission and the Power Price for each 15 minute

interval that the Power Price is less than the electricity cost provided by the Distribution Utility to the JPA. In such event, JPA shall provide Provider with evidence of the pricing for such applicable periods in the form of Distribution Utility bills during the Outage period of the pricing for such applicable periods, and Provider shall provide the calculation and supporting documentation for determining these amounts, to the reasonable satisfaction of the JPA. Except as set forth herein, JPA waives claims related to JPA's costs of purchasing energy to replace what would have been produced by the Solar Facility but for such Outages, along within any associated net metering, or similar, benefits.

If an Outage occurs under this Section and a payment is due from Provider to JPA, Provider shall include in its next invoice(s) to JPA (and in the final invoice for any credit owed for the final Contract Year) a credit for the difference between the electricity cost as provided by the Distribution Utility to the JPA for the applicable period.

F. Distribution Utility Electric Service. JPA may take Parallel Energy Services from Distribution Utility at the Site.

G. Adjustments to Power Price. The Parties acknowledge that the Power Price set forth in Table 1 of Exhibit B is based on certain assumptions by Provider, and that the Power Price may, if such assumptions prove to be inaccurate, require an adjustment to the Power Price following the Effective Date. Adjustments to the Power Price are solely attributable to these condition(s) outlined below:

Distribution Utility Upgrades. Provider assumed that the total amount of Distribution Utility Upgrades to be required by Distribution Utility in connection with the Project would not exceed $398,556.19 (the "Upgrade Estimate"). If the actual cost reasonably incurred by Provider for Distribution Utility Upgrades exceeds the Upgrade Estimate, then Provider shall be entitled to a proportionate increase of the Power Price in an amount of $0.0001/kWh for each $10,000 increase in cost above the Upgrade Estimate. If the actual cost reasonably incurred by Provider for Distribution Utility Upgrades is less than the Upgrade Estimate, JPA shall be entitled to a proportionate decrease of the Power Price in an amount of $0.0001/kWh for each $10,000 decrease in cost below the Upgrade Estimate. Provider shall provide invoices showing all such adjustment in costs to JPA. Any agreement for JPA to cover additional amounts shall come in the form of a jointly-executed change order in accordance with Exhibit G.

5. Construction, Operation, & Maintenance.

A. Provider's Contractor(s). Provider shall ensure that any party contracting with Provider for any engineering, procurement, design, installation, or construction of the Solar Facility shall possess sufficient knowledge, experience, expertise, licensing, and financial capacity and creditworthiness necessary for satisfactory completion of Provider's obligations under this Agreement. The contractor performing the construction work on the Project shall possess a Class B or C-10 California Contractor State License, and all other required licenses for performing work under this Agreement, prior to performing any work on the Project. Provider represents and warrants that it has the financial capacity, creditworthiness, and bonding sufficient to satisfy all of Provider's obligations under this Agreement, including, but not limited to, any instance of default or other failure by Provider's contractor(s) to complete the work required to satisfy Provider's

obligations under this Agreement. Prior to contracting with any such party, Provider shall obtain and review the qualification of such party and complete any necessary background check or fingerprinting required by law or by JPA. Provider shall further procure from contractor such performance and payment bonds and any other assurances as Provider deems reasonably necessary to secure contractor's timely completion of the Solar Facility.

B. Permits. Provider shall be solely responsible for ensuring that the Solar Facility is constructed in compliance with all applicable laws, regulations, and Permits, and in accordance with the standards set by any governmental program providing funding for the Solar Facility, including, but not limited to, all improvements, conditions, and mitigation measures required for compliance with the California Environmental Quality Act ("CEQA") and the Americans with Disabilities Act ("ADA"). Provider's ADA obligations under this Agreement shall apply only to the Solar Facility and to the construction work performed on the Site by Provider or Provider's contractors; such ADA obligations shall not apply to any building, facility, parking lot, or path or travel outside of the Solar Facility footprint on the Site. Provider shall, at Provider's sole cost and expense, obtain from all Governmental Authorities having jurisdiction over the Project, all necessary Governmental Approvals and other Permits and approvals required for the installation, operation, and maintenance of the Solar Facility, including, but not limited to fire safety, California Occupational Safety and Health Administration ("OSHA"), utility interconnection, right-of-way permits, easement agreements, and other related requirements.

To the extent action is required by JPA, JPA shall, upon the request of Provider, use reasonable efforts to assist Provider in obtaining and retaining Permits, licenses, releases, and other approvals necessary for the design, construction, engineering, installation, operation, and maintenance of the Solar Facility. Provider shall reimburse JPA for costs reasonably incurred by JPA in assisting the Provider under this Section. Provider shall be responsible for all costs, expenses, and improvements to the extent required to obtain or comply with any permits, Government Approvals, or other requirement under state or federal law made necessary as a result of the Solar Facility installation, operation, and maintenance. Specifically, the Provider is required to obtain and submit all documents to close out the Project with the Governmental Authorities having jurisdiction over the Project. In addition to stamped and approved plans, Provider shall provide any required installation compliance confirmation letter(s) to any applicable Governmental Authorities.

C. Notice of Output Interruptions. Each Party shall notify the other Party as soon as reasonably practicable following its discovery of any material malfunction of the Solar Facility or interruption in the supply of electricity from the Solar Facility. Each Party shall designate and advise the other Party of personnel to be notified in the event of such a malfunction or interruption. Provider shall correct, or cause to be corrected, the conditions that caused the malfunction or interruption as soon as reasonably practicable. However, in no event shall Provider's response to investigate the problem and initiate appropriate corrective action be greater than forty-eight (48) hours following receipt of notice or upon discovery of such malfunction or interruption. In addition, Provider shall remotely monitor the entire system on a daily basis for the presence of alarm conditions and general performance utilizing the data acquisitions systems and monitoring systems installed by the Provider at the Site, as described in Exhibit G.

D. Site Operations. In order to prevent any unreasonable disturbance or interruption of

JPA's activities, Provider shall accommodate JPA's normal operations schedule and scope of activities conducted on the Site during construction and on-going operation of the Solar Facility pursuant to this Agreement.

E. Operation and Maintenance of Solar Facility. Provider shall be responsible for all operations, maintenance, and repair of the Solar Facility, except to the extent that any maintenance or repair is made necessary by the sole negligent acts or omissions or willful misconduct of the JPA. All maintenance, repairs, and operations shall be conducted in the manner set forth in this Agreement, and Provider shall reasonably accommodate and cooperate with the JPA to ensure the JPA's activities, facility uses, and scheduling requirements are not unreasonably impeded. Provider's repair work responsibilities shall include, but are not limited to, any repair required as a result of damage caused by the Provider or its contractors, subcontractors, or vendors, to the JPA's facilities within a period of five (5) years following the date the damage was discovered or reasonably should have been discovered by the JPA. Provider is responsible for repairs and/or replacement of system components that are damaged from vandalism, theft, or criminal activity; provided, that JPA shall be responsible for repairs and/or replacement of damaged system components to the extent any such damage is attributable to (i) the active negligence or willful misconduct of JPA, its officers, employees, or agents, or (ii) the JPA's failure to promptly repair damage to the fencing on the Site following receipt of written notice from Provider of such damage. The Parties agree that during the Term, the JPA may replace, relocate or refurbish the fencing on the Site, provided that such replaced, relocated or refurbished fencing is equivalent in its effectiveness as a security barrier to the fencing in existence as of the Effective Date.

F. Prevailing Wages. The Project is subject to compliance with the prevailing wage provisions of the California Labor Code and the prevailing wage rate determinations of the Department of Industrial Relations. These rates are on file at the JPA's main office at the address or may be obtained online at http//www.dir.ca.gov/dlsr. A copy of these rates shall be posted at the job site by Provider. Provider and all contractors and subcontractor(s) under it, shall comply with all applicable Labor Code provisions, which include, but are not limited to the payment of not less than the required prevailing rates to all workers employed by them in the execution of this PPA and the employment of apprentices. Provider hereby agrees to indemnify and hold harmless the JPA, its officials, officers, agents, employees and authorized volunteers from and against any and all claims, demands, losses or liabilities of any kind or nature which the JPA, its officials, officers, agents, employees, and authorized volunteers may sustain or incur for noncompliance with any applicable Labor Code provisions arising out of or in connection with the Project.

The Provider, its contractor(s) and subcontractor(s) shall keep or cause to be kept an accurate record for work on this Project showing the names, addresses, social security numbers, work classification, straight time and overtime hours worked and occupations of all laborers, workers and mechanics employed by them in connection with the performance of this Agreement or any subcontract thereunder, and showing also the actual per diem wage paid to each of such workers, which records shall be open at all reasonable hours to inspection by the JPA, its officers and agents and to the representatives of the Division of Labor Law Enforcement of the State Department of Industrial Relations.

The Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations in accordance with the provisions of Sections 1725.5, 1771.1, 1771.3, 1771.4, 1771.5, and

1771.7 of the Labor Code. This requirement applies regardless of whether the Project will use State funds. At least seven (7) Days prior to the later of commencement of construction work or thirty (30) Days after execution of the Agreement, Provider will provide JPA with the name and registration information, including all information required for the PWC-100 form, for all contractors of any tier. Such information must be supplemented if additional contractors work on the Project. Pursuant to Labor Code section 1771.1, for any proposal submitted, or any contract for public work entered into, a contractor or subcontractor shall not be qualified to bid on, be listed in a proposal (subject to the requirements of Section 4104 of the Public Contract Code), or engage in the performance of any contract for public work, as defined by Division 2, Part 7, Chapter 1 (§§ 1720 et seq.) of the Labor Code, unless currently registered and qualified to perform public work pursuant to Section 1725.5 of the Labor Code. Provider shall post all required job site notices pursuant to the Labor Code and related regulations. Provider shall ensure that, to the extent required by law, that Provider and its contractors and subcontractors maintain current and ongoing registration status with the Department of Industrial Relations.

The Provider, its contractor(s) and subcontractor(s) shall submit records, including those specified in Labor Code section 1776, to the Labor Commissioner as required by Sections 1771.4(a)(3), 1771.4(c)(2), and 1776 of the Labor Code. JPA may withhold $100 for each calendar day after ten Days from Provider's receipt of a request to produce payroll records (as described in Labor Code §1776(a)) that Provider fails to produce such records.

6. Commercial Operation Date; Conditions Precedent; Notice to Proceed.

A. Conditions Precedent to Construction. Provider shall complete the following pre-construction activities relating to the Solar Facility as of the Construction Start Deadline ("Construction Conditions Precedent"):

(1) Within thirty (30) Days after the Effective Date, Provider shall submit to JPA certificates of insurance and endorsements demonstrating compliance with the requirements defined in Section 17 of this Agreement.

(2) Provider shall submit to JPA a fully executed copy of any and all contracts entered into for the engineering, procurement, and/or construction of the Solar Facility.

(3) Provider shall undertake all commercially reasonable efforts to assess the capacity of the Distribution Utility facilities, including, but not limited to, the applicable transformer(s) and conductor(s) and provide a written assessment of such to the JPA.

(4) Provider shall submit to JPA for approval a 90% completed design of the Solar Facility, a detailed construction and installation schedule and a detailed project safety plan. Provider's construction and installation schedule shall include start and completion dates for all categories of work on the Sites, including but not limited to pre-construction activities, installation of major equipment and anticipated Sites deliveries and all required submittal and procurement documentation.

(5) Provider shall submit to JPA evidence that Provider has (a) sufficient finances to fund Provider's obligations under this Agreement, or (b) obtained and secured sufficient financing to fund Provider's obligations under this Agreement. Such

evidence shall be subject to JPA's approval and shall include a signed letter from the financing entity describing its intent and commitment to finance the project.

(6) Provider shall obtain or cause to be obtained all necessary Permits, entitlements, contracts, and agreements required for the commencement of construction of the Solar Facility.

B. Completion of Condition Precedent to Construction; Termination. If Provider is unable to timely complete any of the Construction Conditions Precedent (1) through (6) above by the Construction Start Deadline (one hundred and ten (110) days after the Effective Date), as may be extended in accordance with Section 6(E), JPA may terminate this Agreement without triggering the default provisions of this Agreement, including, but not limited to any default provision requiring the payment of the Termination Value, nor shall any such termination subject the JPA to any other liability. Within five (5) days of Provider's timely satisfaction (or written waiver by JPA) of all Construction Conditions Precedent, JPA shall issue a notice to proceed to Provider ("Notice to Proceed"), informing Provider that it may commence the construction of the Solar Facility on the Site. Provider shall not proceed with construction of the Solar Facility until it has received the Notice to Proceed. Provider shall promptly provide JPA with copies of all forms, documents, and communications received or generated by Provider in connection with this Agreement.

C. Construction; Commercial Operation. Promptly upon receipt of the Notice to Proceed from JPA, Provider shall commence construction of the Solar Facility and shall cause complete installation and start-up of Commercial Operation thereof on or before March 12, 2020 (the "Commercial Operation Deadline"), as such deadline may be extended as provided herein. Prior to the Commercial Operation Deadline, Provider shall:

(1) Effect the execution, in coordination with the JPA, of all agreements required for interconnection of the Solar Facility with the Distribution Utility, including, without limitation, the interconnection agreement(s) and net metering agreement(s) if applicable;

(2) Ensure that all necessary connections and equipment are installed in compliance with all applicable codes and standards, and that Provider has procured or caused the complete installation of all necessary equipment and protection devices to enable delivery of Output from the Delivery Points to JPA's facilities; and

(3) Obtain or cause to be obtained all necessary Permits, entitlements, contracts, and agreements required for the operation and maintenance of the Solar Facility and the sale and delivery of Output to JPA.

D. Commercial Operation. The "Commercial Operation Date" shall be the date on which Provider accurately notifies JPA in writing of the fact that the Solar Facility is mechanically and electrically complete and operational and providing Output through Meters to the Delivery Points under approved and executed Distribution Utility interconnection agreements. Provider shall cause the Commercial Operation Date to occur on or before the Commercial Operation Deadline.

If Commercial Operation has not commenced on or before the sixtieth (60th) day following the Commercial Operation Deadline, JPA may, but shall not be required to, assess delay liquidated damages against Provider in an amount equal to $750 per calendar day ("Delay Liquidated Damages").

Liquidated damages may also be applied to compensate the JPA for undue delays in the completion of punch list items, site clean-up, demobilization, and miscellaneous contractual obligations after Commercial Operation has been achieved. The cost to the JPA for administration, inspection, mileage, and other similar items would be extremely difficult to determine. For that reason, additional liquidated damages, known as "Administrative Delay Liquidated Damages" shall be imposed in the amount of $500 per day, effective forty-five (45) days after Commercial Operation has been achieved. Administrative Delay Liquidated Damages will be assessed until the JPA reasonably agrees that all outstanding work has been completed.

Notwithstanding any other provision herein to the contrary, the aggregate limit of Delay Liquidated Damages and Administrative Delay Liquidated Damages hereunder shall not exceed $120,000.

If Commercial Operation has not commenced on or before the one hundred eightieth (180th) day following the Commercial Operation Deadline (as may be extended herein), JPA may, but shall not be required to, terminate this Agreement without triggering the default provisions of the Agreement as to JPA or any other JPA liability, including any default provision which would otherwise require payment of the Termination Value.

E. Extension of Construction Start Deadline and Commercial Operation Deadline.

If the commencement of construction and/or Commercial Operation of the Solar Facility is delayed due to (a) the actions or omissions of the Distribution Utility (not caused by or resulting from the negligence or delay of Provider); (b) a Force Majeure event; (c) title matters, real property issues, and/or latent, unknown or unforeseen Site conditions relating to the Site which differ materially from the site conditions disclosed as of the date hereof and which delay Provider's ability to obtain financing for the Solar Facility on commercially reasonable terms; (d) any other delays in Provider's ability to obtain financing for the Solar Facility on commercially reasonable terms that are not attributable to conditions described in subsection (c) of this Section 6(E); or (e) any delay, suspension or breach of this Agreement by JPA (not caused or resulting from the negligence or delay of Provider), then the Construction Start Deadline and/or Commercial Operation Deadline shall be equitably extended on day for day basis until the applicable delay event concludes or is otherwise resolved; provided, however that upon a delay solely attributable to subsection (d) of this Section 6(E), the Construction Start Deadline and/or Commercial Operation Deadline shall only be equitably extended for such delay on a day for day basis for a maximum number of forty five (45) days. Additionally, if a delay event occurs for any reason other than those expressly listed above, or if a delay event described in subsection (d) will extend for more than forty five (45) days, then Provider may request in writing an extension of the Construction Start Deadline and/or Commercial Operation Deadline. At the time of the request, Provider shall present JPA in writing with the reason for delay and confirmation that construction and/or Commercial Operation shall commence within the requested extension time. Provider's written request must also state the date on which Provider reasonably believes the commencement of construction and/or Commercial Operation will be achieved following such extension. The approval of such a request will be at the sole discretion of JPA and if approved

by JPA, Provider shall pay to JPA a non-refundable extension fee of $350 per day for each day of the extended time period. To the extent that Provider fails to meet the Commercial Operation Deadline as extended by the JPA pursuant to this Section, the JPA shall have the options to terminate or assess liquidated damages as set forth in subsection D above.

7. Ownership of Solar Facility, Output, Green Attributes and Environmental Financial Incentives.

A. Ownership of Solar Facility. Title to the Solar Facility shall remain with Provider during the Term unless and until JPA exercises its option to purchase the Solar Facility as set forth herein. The Solar Facility, including, but not limited to any components thereof, may not be sold, leased, assigned, mortgaged, pledged, or otherwise alienated or encumbered by JPA. JPA shall not cause or permit the Solar Facility or any part thereof to become subject to any lien, encumbrance, pledge, levy, or attachment arising by, under, or through JPA. Provider shall bear all risk of loss with respect to the Solar Facility, except for losses arising from the negligence or willful acts or omissions by JPA or its agents or employees. Provider shall be solely responsible for the Solar Facility's operation and maintenance in compliance with all applicable laws, regulations, and Permits. Provider shall not be responsible for the cost or expense of any maintenance required as a direct result of the JPA's negligence or willful misconduct.

B. Ownership of Output, Green Attributes, and Environmental Financial Incentives. Provider is the exclusive owner of any Environmental Financial Incentives associated with the construction, ownership and operation of the Solar Facility. JPA will assign its interest (if any) in all such credits and other financial incentives to Provider. JPA is the exclusive owner of, and may assign or sell in its sole discretion, all Green Attributes, including, but not limited to, Renewable Energy Certificates ("REC"), and REC Reporting Rights, attributable to the Solar Facility and the Output therefrom. Without additional charge to JPA, Provider shall take and bear the costs of all steps necessary to secure and perfect interest in the Green Attributes, including, but not limited to, registering the RECs with WREGIS. The Parties agree to subsequently negotiate in good faith the ownership of any additional benefit or incentive associated with this Agreement which did not exist at the time this Agreement was entered into.

8. Payment.

A. Monthly Invoices. Provider shall provide an invoice for the Solar Facility to the JPA on a monthly basis, by the 15th day of each calendar month following the Commercial Operation Date of the Solar Facility. Each invoice will set forth (i) the Output delivered to JPA in the preceding month, (ii) the Power Price for such month, (iii) the total amount to be paid by JPA to Provider for Output delivered in the preceding month, (iv) the year and month of the Term, (vi) Annual Production Estimate for the relevant year as set forth in Exhibit B, (v) running total of Annual Production Estimate for the relevant year as set forth in Exhibit B versus cumulated actual Output for the relevant year, (vi) and any applicable offsets or credits to such invoice amounts.

B. Due Date. The Power Price and all other payments shall be in U.S. Dollars and paid by wire transfer, check, or automated check handling (ACH) payment delivered to Provider at the address specified herein within thirty (30) Days of the date the invoice is received by the JPA ("Due Date"). If the Due Date is a weekend or a bank holiday, payment will be due the next following business day.

C. Payment Disputes. In the event a Party disputes all or a portion of an invoice, or any other claim or adjustment arises, such disputes shall be resolved pursuant to Section 15.

9. Purchase Option.

A. Purchase of Solar Facility. Unless JPA is in default of its obligations under this Agreement, JPA shall have the option to purchase all of Provider's right, title, and interest in and to the Solar Facility on the sixth (6th), tenth (10th), fifteenth (15th) and twentieth (20th) anniversaries of the Commercial Operation Date or upon expiration of the Term hereof ("Purchase Option"). If JPA wishes to exercise its Purchase Option, it must provide notice to Provider at least ninety (90) Days in advance of any such anniversary or the expiration of the Term. The purchase price shall be the greater of (1) the Fair Market Value, as defined under this Agreement, of the Solar Facility as of the applicable anniversary date or the expiration of the Term or (2) the applicable Purchase Option Price indicated in Exhibit D. Upon the exercise of the Purchase Option and Provider's receipt of all amounts then owing by JPA under this Agreement, the Parties will execute all documents necessary for the purchase and sale of the Solar Facility, including but not limited to, the delivery of the purchase price, the transfer of title to the Solar Facility, and to the extent transferable, the remaining period, if any, on all warranties and Environmental Financial Incentives and Green Attributes for the Solar Facility to JPA. Provider shall remove any encumbrances placed or allowed on the Solar Facility by Provider. On the date on which Provider transfers title to all of the Solar Facility to JPA in accordance with this Section, this Agreement shall terminate without default or penalty to JPA.

B. Fair Market Value. The "Fair Market Value" of the Solar Facility shall be the value thereof as determined by a nationally recognized independent appraiser selected by the Parties, with experience and expertise in the solar photovoltaic industry to value such equipment. The valuation made by the appraiser shall be binding on the Parties in the absence of fraud or manifest error. The costs of the appraisal shall be borne by the Parties equally. If the Parties are unable to agree on the selection of an appraiser, such appraiser shall be selected by the two appraiser firms proposed by each Party.

10. Early Termination.

A. Provider's Early Termination Rights. Provider shall have the right, but not the obligation, to terminate this Agreement without triggering the default provisions of this Agreement or any liability under this Agreement prior to expiration of its Term upon the occurrence of:

(1) An unstayed order of a court or administrative agency, or a change in state or federal law or regulation, imposing a material or adverse cost, regulation, or other requirement upon the sale of Output which precludes the Provider from providing Output pursuant to this Agreement. Such termination shall be conditioned upon Provider's proof of the financial impossibility and violation of Provider's Solar Facility financial arrangement to the reasonable satisfaction of the JPA.

(2) Condemnation, destruction, or other material damage to the Site that renders all or a portion of the Site, in Provider's determination, unsuitable for Provider's use under this Agreement or otherwise negatively impacts the Site.

(3) A third party challenges the Solar Facility (or the Project) on CEQA grounds, or CEQA improvements, conditions, mitigation and/or monitoring measures are imposed on the Solar Facility (or the Project) that, in Provider's sole discretion, would impose a cost which would preclude the Provider from providing Output pursuant to this Agreement. Such termination shall be conditioned upon Provider's proof of the financial impossibility and violation of Provider's Solar Facility financial arrangement to the reasonable satisfaction of the JPA.

(4) Provider is unable to obtain Project financing for the Solar Facility on commercially reasonable terms prior to the Construction Start Deadline.

(5) Provider discovers or encounters title matters, real property issues, and/or latent, unknown or unforeseen Site conditions relating to the Site prior to the Construction Start Deadline which differ materially from the site conditions disclosed as of the date hereof and which, in Provider's reasonable discretion, makes the construction, operation and/or maintenance of the Solar Facility infeasible. Such termination shall be conditioned upon Provider's proof of the infeasibility to the reasonable satisfaction of the JPA.

In the event Provider exercises its right under this Section 10(A) prior to the Construction Start Deadline, then Provider may terminate this Agreement without triggering the default provisions of this Agreement, nor shall any such early termination subject Provider to any other liability. In the event Provider exercises its right under this Section after the Construction Start Deadline, then, JPA may elect to either (a) purchase the Solar Facility at Fair Market Value as of the time of Provider's notice; or (b) require Provider to remove the Solar Facility within one hundred twenty (120) days at Provider's sole cost and expense and restore the Site as required in Section 3.

B. JPA's Early Termination Rights. If JPA ceases to conduct operations at or vacates the Site on or before the seventh (7th) anniversary of the Commercial Operation Date, Provider may, but shall not be required to, deem JPA in default of this Agreement. On or after the seventh (7th) anniversary of the Commercial Operation Date, JPA may, upon payment to Provider of the Termination Value applicable to the Site and without further penalty hereunder, terminate this Agreement. Provider shall remove the Solar Facility in accordance with Section 3. If the License Agreement is terminated by LVMWD and such termination is not due to the fault of Provider, then this Agreement shall also terminate and the JPA shall be liable to Provider for payment of the Termination Value and for any costs associated with removal of the Solar Facility from the Site.

11. Delivery; Risk of Loss; Relocation.

A. Output Specifications. Provider shall ensure that all energy generated by the Solar Facility conforms to Distribution Utility specifications for energy being generated and delivered to the Sites' electric distribution systems, which shall include the installation of proper power conditioning and safety equipment, submittal of necessary specifications, coordination of Distribution Utility testing and verification, and subject to Section 4B, all related costs.

B. Transfer of Output. Provider shall be responsible for the delivery of Output to the Delivery Points. Provider shall undertake all commercially reasonable efforts to assess the capacity of the Distribution Utility transformer(s) and conductor(s). To the extent any subsequent

upgrade to such facilities is required and not performed and funded by the Distribution Utility, the Provider shall cause such upgrades to be completed at its sole cost and expense, subject to the adjustments described in Section 4(G). Title and risk of loss of the Output shall pass from Provider to JPA upon delivery of the Output from the Delivery Points to the JPA. To the extent applicable to the Project, prior to the start of construction of the Solar Facility, Provider shall use commercially reasonable efforts to assist JPA in JPA's selection of equipment installations on JPA's side of any Delivery Point.

C. Relocation. On or after the seventh (7th) anniversary of the Commercial Operation Date, JPA may, at its option, require that the Solar Facility be permanently relocated, either on an existing Site or to another site owned and operated by JPA, at a location with at least equal insolation to the existing Site and reasonably acceptable to both Parties (the "Relocation Site"). JPA shall give Provider at least sixty (60) calendar Days' notice of JPA's need to move or relocate the Solar Facility. Following agreement on a Relocation Site, the Parties will amend this Agreement to memorialize the required changes in the definition of "Site."

JPA shall pay the reasonable costs arising in connection with the relocation of the Solar Facility, including removal costs, necessary storage costs, re-installation, re-commissioning costs, and any applicable interconnection fees. JPA shall additionally compensate Provider for any revenue during the period in which energy cannot be generated and delivered to JPA from the Solar Facility being relocated, at the JPA Suspension Rate, as defined below, prorated as needed to apply on a daily basis. JPA shall also execute such consents or releases reasonably required by Provider or Provider's financing Parties in connection with the relocation. Within thirty (30) Days of agreement on a Relocation Site, Provider will provide JPA with a calculation of the estimated time required for such relocation, and the total anticipated amount of lost revenues and additional costs to be incurred by Provider as a result of such relocation. JPA will have twenty (20) Days to review the calculation and make, in writing, any objections to the calculation.

If an acceptable Relocation Site cannot be located, this Agreement shall terminate with respect to the applicable Site or Sites, upon Provider's thirty (30) Days' written notice. In the event that an acceptable Relocation Site cannot be agreed upon, JPA shall pay Provider an amount equal to the Termination Value for the Site requiring termination. In the event of a termination occurring under this Section, Provider shall remove the Solar Facility and restore the Site in accordance with Section 3, at no additional cost to the JPA.

D. Temporary Suspension by JPA. Notwithstanding any other provision of this Agreement, JPA shall have the right, upon written notice to Provider, to temporarily suspend operations and facility Output for any reason. JPA shall have the right, upon written notice to Provider, to temporarily render the Solar Facility non-operational for up to forty-eight (48) hours per year without penalty or charge by Provider. If JPA requires temporary suspension of the Solar Facility for more than forty-eight (48) hours in a given year, JPA shall pay to Provider an amount, prorated as necessary, equal to the amount of the average monthly payment for power purchased pursuant to this Agreement for the preceding twelve (12) months, or for the entire period the Solar Facility has been in Commercial Operation if less than twelve (12) months, for the period of time during which the Solar Facility is not in Commercial Operation in excess of forty eight (48) hours ("JPA Suspension Rate") due to the temporary suspension by JPA.

E. Temporary Suspension by Provider. Provider shall have the right, upon written notice to JPA, to temporarily render the Solar Facility non-operational for up to forty-eight (48) hours per Contract Year without penalty or charge by JPA. If Provider renders the Solar Facility non-operational for a period in excess of forty eight (48) hours, Provider shall pay to JPA a monthly payment (prorated as needed) equal to the difference between the cost to JPA of purchasing energy from the Distribution Utility during the Solar Facility's period of non-operation and the average monthly cost of power purchased under this Agreement for the preceding twelve (12) months, or for the entire period the Solar Facility have been in Commercial Operation if less than twelve (12) months, for the period of time during which the Solar Facility is non-operational.

F. Change in Conditions. If JPA requests an increase in the Output delivered to the Sites, the Parties agree to use good faith efforts to increase such capacity. If Provider and JPA are not able to reach an agreement for such additional Output, JPA may, at its sole discretion, obtain the services of a third party for such purposes, provided that such additional third party provided services and any site access license shall not interfere with Provider's right, title, and interest in the Solar Facility under this Agreement.

G. Performance and Payment Bonds. Prior to commencing any portion of the work on the Project, the Provider (or its construction Contractor) shall apply for and furnish the JPA with separate payment and performance bonds for such work which shall cover 100% faithful performance of and payment of all obligations arising under this Agreement and/or guaranteeing the payment in full of all claims for labor performed and materials supplied for the Work. All bonds shall be provided by a corporate surety authorized and admitted to transact business in California. All bonds shall be submitted on forms subject to the JPA's reasonable approval. To the extent available, the bonds shall provide that no change or alteration of the Contract Documents, extensions of time, or modifications of the time or terms, will release the surety. If the Provider (or its construction Contractor) fails to timely furnish the required bond within five (5) business days' written notice from the JPA, the JPA may put the Provider in default under Section 14, and thereafter may terminate the Agreement for cause without resulting in any default of the JPA if Provider fails to timely cure such default as provided under Section 14.

H. Provider shall make no alteration to the Solar Facility after the Commercial Operation Date intended or reasonably anticipated to permanently increase the nameplate capacity or Output of the Solar Facility without express written approval by the JPA. Notwithstanding the foregoing, Provider may alter the Solar Facility's nameplate capacity on a temporary basis when performing maintenance and repair activities provided that Provider returns the Solar Facility's nameplate capacity to that as of the Effective Date upon the completion of such activities.

12. Metering.

A. Meter. Provider shall provide and maintain a standard revenue grade meter and electronic data acquisition system at the Delivery Point ("Generation Meter") to measure the actual amount of electricity supplied to the JPA by the Solar Facility on a continuous basis. Meters shall be installed and maintained at Provider's sole expense and shall be located within no more than ten (10) feet from the Delivery Point at the Site, and in all cases on the interconnection side of all Provider owned transformers.

B. Meter Testing. Provider shall arrange for all Meters to be tested once per year, at least three (3) months prior to the end of JPA's fiscal year. The tests shall be conducted by independent third parties who are qualified to conduct such tests. Provider shall bear all costs and expenses associated with annual Meter testing. JPA shall be notified ten (10) Days in advance of such tests and shall have a right to be present during such tests. Provider shall provide JPA with the detailed results of all Meter tests.

In addition, the Meters shall be inspected and tested for accuracy at such other times as JPA may reasonably request, but in no event more than once every six (6) month period. JPA shall bear the cost of the additionally requested Meter testing, unless such test shows that a Meter was inaccurate by more than two percent (2%), in which case the Provider shall bear the Meter testing costs.

C. Cost of Meter Repair. If the Meter testing demonstrates that a Meter was operating outside of its allowable calibration (+/- 2%), then the Provider will pay for the cost of the repairs, or replacement, necessary to restore a Meter to proper working order. If a Meter is found to be inaccurate by more than two percent (2%), Invoices from the prior six (6) months, or from the last time such Meter was registering accurately, whichever is less, shall be adjusted in accordance with Section 8, except that JPA shall not be obligated to pay interest on any amount found to be due because Meter was operating outside of its allowable calibration (+/- 2%). Provider shall submit any request for an adjustment in a fiscal year to JPA no later than two (2) months prior to the end of JPA's fiscal year on June 30, and JPA shall not be obligated to pay any adjustment for a prior fiscal year that was not submitted to JPA within two months of the end of such prior fiscal year on June 30. JPA may withhold payments to Provider if a Meter has registered production in excess of 2% of the Output delivered to JPA and Provider fails to provide JPA with the appropriate payment pursuant to Section 8 for the amount which the JPA overpaid to Provider as a result of the Meter being outside of the established calibration range.

D. Meter Data. Provider shall gather and maintain the data from a Meter, including but not limited to interval data registered at least once every fifteen (15) minutes (the "Meter Data") and shall make such Meter Data available to JPA or maintain the Meter Data such that the JPA can access the Meter Data remotely through a secure internet site or such other remote access as the Parties mutually agree to.

E. Meter Data Audit. JPA shall have the right to audit the Invoices and/or the Meter Data once per calendar year upon reasonable prior notice to Provider. If the audit reveals that JPA has been overcharged by more than two percent (2%), Provider shall bear the cost of such audit, but in all other cases JPA shall bear the cost of such audit. If it is determined that the Meter was operating outside of its allowable calibration, the Parties shall also evaluate whether any adjustments to the amount of Output will result in a Shortfall under the Output Guarantee.

F. Maintenance of Meter Data. The Parties shall maintain all records related to Invoices and Meter Data for a period of the greater of (i) 48 months from the date of such Invoice or Meter Data, or (ii) as otherwise required by law. Such records shall be available for audit as described in above.

13. Representations, Warranties and Covenants.

A. Authorization and Enforceability. Each Party represents to the other Party as of the Effective Date that: (i) such Party is duly organized, validly existing and in good standing under the laws of the state of its formation; (ii) the execution and delivery by such Party of, and the performance of its obligations under, this Agreement has been duly authorized by all necessary action, does not and will not require any further consent or approval of any other Person, and does not contravene any provision of, or constitute a default under such Party's organizational documents, any indenture, mortgage or other material agreement binding on such Party or any valid order of any court, or regulatory agency or other body having authority to which such Party is subject; and (iii) this Agreement constitutes the legal and valid obligation of such Party, enforceable against such Party in accordance with its terms, except as may be limited by bankruptcy, reorganization, insolvency, bank moratorium, or similar laws relating to or affecting creditors' rights generally and general principles of equity, whether such enforceability is considered in a proceeding in equity or at law.

B. Insolation. JPA agrees that access to sunlight ("Insolation") is essential to Provider's ability to provide the projected Output and is a material inducement to Provider in entering into this Agreement. Accordingly, JPA shall not permit any interference with Insolation available to the Solar Facility. If JPA becomes aware of any potential development, foliage or trees, or other activity on adjacent or nearby properties that will diminish the Insolation to the Site or the Solar Facility, JPA shall advise Provider of such information and reasonably cooperate with Provider in reasonable measures taken by Provider in an attempt to preserve existing levels of Insolation at the Site and the Solar Facility.

C. Notice of Damage. Each Party shall promptly notify the other Party of any matters it is aware of pertaining to any damage to or loss of the use of the Solar Facility or that could reasonably be expected to adversely affect the Solar Facility.

14. Default and Remedies.

A. Events of Default. In the event of a Party's breach of any performance obligation hereunder or breach of any representation, warranty, covenant, or term of this Agreement, the non-defaulting Party shall provide the defaulting Party with written notice of the default, which notice shall describe the default in reasonable detail. Following the date of receipt of written notice of default, the defaulting Party shall have thirty (30) Days to cure any payment default and forty-five (45) days to cure any other breach or default described in this Agreement; provided, however, that with respect to non-payment defaults, the cure period shall be extended by the number of days (not to exceed an additional ninety (90) Day period) during which an event of Force Majeure is occurring or during which the defaulting Party has begun corrective action and continues to diligently pursue, using commercially reasonable efforts, the completion of such corrective action.

B. Event of Default. In addition to the foregoing, with respect to a Party, there shall be an event of default (each an "Event of Default") if:

(1) such Party fails to timely pay any amount due;

(2) such Party concedes in writing to its inability to pay its debts generally as they become due;

(3) such Party files a petition seeking reorganization or arrangement under the federal bankruptcy laws or any other applicable law or statute of the United States of America or any State, City or territory thereof;

(4) such Party makes an assignment for the benefit of creditors in connection with bankruptcy proceedings;

(5) such Party consents to the appointment of a receiver of the whole or any substantial part of its assets;

(6) such Party has a petition in bankruptcy filed against it, and such petition is not dismissed within 60 Days after the filing thereof;

(7) a court of competent jurisdiction enters an order, judgment, or decree appointing a receiver of the whole or any substantial part of such Party's assets, and such order, judgment or decree is not vacated or set aside or stayed within 60 Days from the date of entry thereof;

(8) under the provisions of any other law for the relief or aid of debtors, any court of competent jurisdiction shall assume custody or control of the whole or any substantial part of such Party's assets and such custody or control is not terminated or stayed within 60 Days from the date of assumption of such custody or control;

(9) such Party ceased its legal existence or ceases doing business or otherwise dissolves; or

(10) such Party breaches a material term of this Agreement and fails to cure said breach within the applicable cure period set forth in Section 14(A) above.

C. Provider Remedies. If an event of default by JPA under Sections 14(A) or 14(B) has occurred and is continuing, then following the expiration of any applicable cure period, Provider may at its discretion: (i) suspend performance under this Agreement, (ii) seek specific performance from a court of appropriate jurisdiction pursuant, and/or (iii) terminate this Agreement, and as Provider's sole and exclusive remedy in connection with such termination, require JPA to pay to Provider as liquidated damages, and not as a penalty, the Termination Value for the Solar Facility, and any and all amounts then owed Provider for Output delivered to JPA as of the date of such termination pursuant to this Agreement. In the event of such termination, Provider shall remove the Solar Facility in accordance with Section 3, at Provider's sole cost and expense.

D. JPA Remedies. If an event of default by Provider under Sections 14(A) or 14(B) has occurred and is continuing, then following the expiration of any applicable cure period, JPA may at its discretion: (i) suspend performance under this Agreement, (ii) seek damages or specific performance from a court of appropriate jurisdiction, and/or (iii) terminate this Agreement. In the event that JPA terminates this Agreement pursuant to this Section, JPA may elect to either (a) purchase the Solar Facility at Fair Market Value as of the time of the event of default; or (b) require Provider to remove the Solar Facility within one hundred twenty (120) Days at Provider's sole cost

and expense and restore the Site as required in Section 3.

E. Limitation of Liability. Except with respect to the payment of Delay Liquidated Damages or Administrative Liquidated Damages hereunder or the payment of the Termination Value, and except with respect to the indemnification obligations set forth in Section 17(A) below, neither Party shall be liable to the other Party for any special, punitive, exemplary, indirect or consequential damages arising out of, or in connection with, this Agreement. Additionally, except with respect to any claim covered by Provider maintained insurance under this Agreement (up to the applicable limits set forth in Section 17(B) below), and except for (i) any Energy Shortfall Amount payment(s), or (ii) a payment required under Section 4(E), 6(E), or 11(E) made by Provider to JPA under this Agreement, Provider's aggregate liability to JPA arising out of, or in connection with, this Agreement shall be limited to $5,610,023.86.

15. Dispute Resolution. The Parties agree to make a good faith attempt to resolve any and all controversies, claims, disagreements, or disputes between the Parties arising out of or related to this Agreement ("Dispute"). In the event of any Dispute, either Party may give notice of the dispute to the other Party. In the event a Party Disputes all or a portion of an invoice or other payment, the disputing Party shall timely pay any undisputed portion of such amount due. The Parties shall first use good faith, reasonable, diligent efforts to resolve the dispute within ninety (90) Days from the date of such notice. If the Parties do not resolve their dispute within ninety (90) Days of notice, then the Parties may, upon mutual agreement, submit to mediation before a mutually agreed upon mediator. In the event the dispute is not resolved through mediation, the Parties may pursue their legal rights through any other legally permissible means.

16. Taxes; Liens.

A. Taxes. Provider shall pay any income taxes imposed on Provider due to the sale of energy under this Agreement. JPA shall be responsible for all real property taxes and assessments which may be levied, assessed or imposed upon or with respect to the Site, except that Provider shall pay any increase in real property taxes and assessments resulting from the addition of the Solar Facility to the Site. Provider shall not be responsible for the payment of any increase in taxes and assessments resulting from the loss or removal of any tax exemption on the Site, any increase in the assessed value of the land portion of the Site as distinct from the improvements comprising the Solar Facility and any ancillary improvements in connection with the Solar Facility. This Agreement may result in the creation of a possessory interest (Rev. & Tax. Code § 107.6). If such a possessory interest is vested in Provider, Provider may be subjected to the payment of personal property taxes levied on such interest in the Solar Facility. Provider shall be responsible for the payment of, and shall pay before becoming delinquent, all taxes, assessments, fees, or other charges assessed or levied upon Provider, the Project and the Solar Facility. Provider further agrees to prevent such taxes, assessments, fees, or other charges from giving rise to any lien against the Site or any improvement located on or within the Site. Nothing herein contained shall be deemed to prevent or prohibit Provider from contesting the validity or amount of any such tax, assessment, or fee in the manner authorized by law. Provider shall be responsible for payment of any real property taxes, personal property taxes, possessory interest taxes, permit fees, business license fees, and any and all fees and charges of any nature levied against the Solar Facility and operations of Provider at any time. If bills for taxes on Solar Facility are received by the JPA, JPA shall remit such bills to Provider.

B. Liens. Provider shall not directly or indirectly cause, create, incur, assume, or suffer

to exist any liens on or with respect to the Site or JPA's interest therein. If Provider breaches its obligations under this Section, it shall immediately notify the JPA in writing, shall promptly cause such lien to be discharged and released of record without cost to JPA, and shall defend and indemnify JPA against all costs and expenses (including reasonable attorneys' fees and court costs at trial and on appeal) incurred in discharging and releasing such lien.

17. Liability and Indemnity; Insurance.

A. Indemnity. To the fullest extent provided for by law, each Party ("Indemnifying Party") agrees to indemnify, promptly defend following receipt of the written notice described below, and hold harmless the other Party, its directors, officers, employees, and agents (each, an "Indemnified Party") from and against any and all third-party claims, including demands, actions, damages, loss, costs, expenses, and attorney's fees (collectively, "Indemnity Claims"), arising out of or resulting from any breach, negligent act, error or omission, or intentional misconduct by the Indemnifying Party or its trustees, directors, officers, employees, contractors, subcontractors, or agents under the terms of this Agreement; provided, however, that the Indemnifying Party will not have any obligation to indemnify the Indemnified Party from or against any Indemnity Claims to the extent caused by, resulting from, relating to or arising out of the negligence or intentional misconduct of an Indemnified Party or any of its directors, officers, employees, or agents.

If an Indemnified Party determines that it is entitled to defense and indemnification under this Section, such Indemnified Party shall promptly notify the Indemnifying Party in writing of the Indemnity Claim and provide all reasonably necessary or useful information, and authority to settle and/or defend Indemnity Claim. Defense and indemnification provided by the Indemnifying Party under this Section shall be provided with legal counsel reasonably agreed to by the Indemnified Party. No settlement that would impose costs or expense upon the Indemnified Party shall be made without such Party's written consent.

B. Insurance.

Policies: Provider shall obtain and maintain during the entire term of this Agreement the following insurance policies from companies authorized to issue insurance in the State of California:

(1) Comprehensive General Liability, including premises-operations, products/completed, broad form property damage, bodily injury, and blanket contractual liability with the following coverages:

General Liability:

$1,000,000 per person per occurrence

$2,000,000 annual aggregate combined

$1,000,000 property damage or bodily injury per occurrence

Cross-liability exclusions prohibited

(2) Automobile Liability, including owned, hired, and non-owned vehicles with the following coverages:

Automobile Liability:

$1,000,000 per person per occurrence

$2,000,000 annual aggregate combined

$1,000,000 property damage or bodily injury per occurrence

Cross-liability exclusions prohibited

(3) Workers' Compensation insurance in amounts in accordance with statutory requirements.

(4) Professional Liability Insurance with limits not less than $1,000,000 per claim.

(b) Provider shall provide JPA with certificates of insurance reflecting the insurance coverages described in the paragraphs above, upon request.

(c) The insurance policies required above shall contain or be endorsed to contain all of the following specific provisions:

(1) Commercial general liability and automobile liability:

(i) JPA and its Board members, officers, employees, agents and volunteers shall be added as additional insureds.

(ii) Provider's insurance shall be primary insurance as respects the JPA, its Board members, officers, employees, agents, and volunteers and any insurance or self-insurance maintained by JPA shall be in excess of Provider's insurance and shall not contribute to it.

(iii) Any failure to comply with the claim reporting provisions of the policies or any breach of a policy warranty shall not affect coverage under the policy provided to JPA, its Board members, officers, employees, agents and volunteers.

(iv) The policies shall contain a waiver of transfer rights of recovery ("waiver of subrogation") against JPA, its Board members, officers, employees, agents, and volunteers, for any claims arising out of the work of Provider.

(v) The policies may provide coverage that contains deductible or self-insured retentions. Such deductible and/or self-insured retentions shall not be applicable with respect to the coverage provided to JPA under such policies. Provider shall be solely responsible for deductible and/or self-insured retention and JPA, at its option, may require Provider to secure the payment of such deductible or self-insured retentions by a surety bond or an irrevocable and unconditional letter of credit. The insurance policies that contain deductibles or self-insured retentions in excess of

$25,000 per occurrence shall not be acceptable without the prior approval of JPA.

(vi) Prior to start of work under this Agreement, Provider shall file with JPA evidence of insurance as required above from an insurer or insurers certifying to the required coverage. The coverage shall be evidenced on a certificate of insurance signed by an authorized representative of the insurer(s). Should the required coverage be furnished under more than one policy of insurance, Provider may submit as many certificates of insurance as needed to provide the required amounts.

(2) Each policy required by this section shall contain a policy cancellation clause that provides the policy shall not be cancelled or otherwise terminated by the insurer or the Provider, or reduced in coverage or in limits, except after thirty (30) days written notice by certified mail, return receipt requested, has been given to the JPA, Attention: Director of Finance & Administration.

(d) Insurance required by this Agreement shall be placed with insurers licensed by the State of California to transact insurance business of the types required herein. Each insurer shall have a current Best Insurance Guide rating of not less than A: VII unless prior approval is secured from the JPA as to the use of such insurer.

(e) Provider shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein. Provider shall maintain evidence of compliance with the insurance requirements by the subcontractors at the job site and make them available for review by JPA.

(5) JPA Insurance. Once the Solar Facility is installed, the JPA represents that it maintains and covenants that it shall maintain during the Term (i) insurance sufficient to insure it against loss or destruction of the Site, including losses occasioned by operation of the Solar Facility, and (ii) general liability insurance including bodily injury, property damage, contractual, and personal injury. Notwithstanding the foregoing, JPA reserves the right to self-insure.

18. License. Provider shall, and JPA shall cause LVMWD to, enter into a License Agreement following the Effective Date at Provider's request that is substantially in the form attached hereto as Exhibit H.

19. Assignment; Cooperation with Financing.

A. Assignment by Provider. Provider may sell, transfer, or assign its rights under this Agreement or any right, interest, or obligation therein (collectively, an "Assignment") only upon the prior written consent of JPA, which consent may not be unreasonably withheld, conditioned or delayed, provided that any assignee possesses all required skills, knowledge, expertise, experience, and financial capacity, and creditworthiness necessary to perform Provider's obligations under this Agreement, and assumes in writing the obligations of Provider under this Agreement. Provider shall provide JPA with no less than sixty (60) Days' notice of the request to transfer ownership of the Project. Notice shall identify the party purchasing the Project and provide sufficient detail of the proposed owner for JPA to evaluate the new owner. Notice shall include, but not be limited to, the following details of the proposed owner: Experience with PPA's and

current portfolio; Past two years of financials; Proof of insurance, meeting Purchaser requirements and naming the Purchaser; Confirmation of operations and maintenance provider and outline of operations and maintenance program if different from existing; Details and example of annual report and invoicing; and Confirmation that all terms under this Agreement and any related documents and agreements will be performed. Notwithstanding the foregoing, Provider may, without the prior written consent of JPA, (i) assign, mortgage, pledge, grant security interests, sell or otherwise encumber its interests in this Agreement to any Secured Party in connection with any financing for the ownership, acquisition, construction, operation, or use of the Solar Facility as set forth in subsection B, or (ii) assign this Agreement to an affiliate of Provider which is controlled by Provider or under common control with Provider. This Agreement shall be binding on and inure to the benefit of the successors and permitted assignees.

B. Collateral Assignment by Provider for Financing Purposes. In the event Provider assigns its rights under this Agreement as security in connection with any financing transaction entered into by Provider, Provider may mortgage or grant a security interest in this Agreement and the Solar Facility, and may collaterally assign, pledge or sell this Agreement and the Solar Facility to any mortgagees or holders of security interests, including their successors or assigns (hereinafter collectively referred to as "Secured Parties"), provided that any such collateral assignment of this Agreement by Provider shall not release Provider from its obligations or liabilities under this Agreement. In order to facilitate such an assignment, sale, conveyance, or financing with respect to a Secured Party, JPA agrees to not unreasonably withhold, condition, or delay its compliance with any reasonable request that JPA execute any consent, estoppel agreement, any opinions of counsel as may be reasonably requested by Provider or Secured Party or other documents related to such financing transaction as may reasonably be required by such Secured Parties, and further agrees as follows:

(1) Consent to Collateral Assignment. JPA hereby consents to both of the sale of the Solar Facility to a Secured Party and the collateral assignment to the Secured Party of the Provider's right, title and interest in and to this Agreement.

(2) Rights of Secured Party. Notwithstanding any contrary term of this Agreement:

(a) Step-In Rights. The Secured Party, as owner of the Solar Facility, or as collateral assignee of this Agreement, shall be entitled to exercise, in the place and stead of Provider, any and all rights and remedies of Provider under this Agreement in accordance with the terms of this Agreement. The Secured Party shall also be entitled to exercise all rights and remedies of owners or secured parties, respectively, generally with respect to this Agreement and the Solar Facility;

(b) Opportunity to Cure Default. The Secured Party shall have the right, but not the obligation, to pay all sums due under this Agreement and to perform any other act, duty or obligation required of Provider thereunder or cause to be cured any default of Provider thereunder in the time and manner provided by the terms of this Agreement. Nothing herein requires the Secured Party to cure any default of Provider under this Agreement or to perform any act, duty or obligation of Provider under this Agreement (unless the Secured Party has succeeded to Provider's interests under this Agreement), but JPA hereby gives it the option to do so;

(c) Exercise of Remedies. Upon the exercise of remedies, including any sale of

the Solar Facility by the Secured Party, whether by judicial proceeding or under any power of sale contained therein, or any conveyance from Provider to the Secured Party (or any assignee of the Secured Party as defined below) in lieu thereof, the Secured Party shall give notice to JPA of the transfer or assignment of this Agreement. Any such exercise of remedies shall not constitute a default under this Agreement;

(d) Cure of Bankruptcy Rejection. Upon any rejection or other termination of this Agreement pursuant to any process undertaken with respect to Provider under the United States Bankruptcy Code, at the request of Secured Party made within ninety (90) days of such termination or rejection, JPA shall enter into a new agreement with Secured Party or its assignee having substantially the same terms and conditions as this Agreement.

(3) Right to Cure.

(a) Cure Period. JPA will not exercise any right to terminate or suspend this Agreement unless it shall have given the Secured Party prior written notice of its intent to terminate or suspend this Agreement, as required by this Agreement, specifying the condition giving rise to such right, and the Secured Party shall not have caused to be cured the condition giving rise to the right of termination or suspension within thirty (30) days after such notice or (if longer) the periods provided for in this Agreement; provided that if such Provider default reasonably cannot be cured by the Secured Party within such period and the Secured Party commences and continuously pursues cure of such default within such period, such period for cure will be extended for a reasonable period of time under the circumstances, such period not to exceed an additional ninety (90) days. The Parties' respective obligations will otherwise remain in effect during any cure period.

(b) Continuation of Agreement. If the Secured Party or its assignee (including any purchaser or transferee), pursuant to an exercise of remedies by the Secured Party, shall acquire title to or control of Provider's assets and shall, within the time periods described in Section 19(B)(3)(a) above, cure all defaults under this Agreement existing as of the date of such change in title or control in the manner required by this Agreement and which are capable of cure by a third person or entity, then such person or entity shall no longer be in default under this Agreement, and this Agreement shall continue in full force and effect.

(4) Secured Party a Third Party Beneficiary. JPA agrees and acknowledges that Secured Party is a third party beneficiary of the provisions of this Section 19(B).

C. Assignment by JPA. Except as otherwise provided in this Agreement, JPA may assign its rights under this Agreement only upon the prior written consent of Provider, which consent may not be unreasonably withheld, conditioned, or delayed; provided that any such assignee (a) is of equal or greater creditworthiness than JPA and (b) assumes in writing the obligations of JPA under this Agreement. Notwithstanding the foregoing, JPA may assign its rights under this Agreement without Provider's consent to any Person succeeding to all or substantially all of the assets of JPA of equal or greater creditworthiness than JPA, and provided, further, that any such transferee or assignee assumes in writing the obligations of JPA under this Agreement.

20. Confidentiality; Publicity.

A. Confidential Information. Any financial, statistical, personal, technical, and other data and information relating to a Party's operations which are made available to the other Party in order to carry out this Agreement shall be reasonably protected by such other Party from unauthorized use, except to the extent that disclosure thereof is required to comply with applicable law, including but not limited to the California Public Records Act. The disclosing Party shall identify all confidential data and information at the time it is provided. Confidentiality does not apply to information, which is known to a receiving Party from other sources, which is otherwise publicly available, or which is required to be disclosed pursuant to an order or requirements of a regulatory body or a court.

B. Disclosure. Other than under the REC Reporting Rights and except as may be required by applicable law, including but not limited to, the California Public Records Act, or as otherwise identified above, neither Party shall make any disclosure of any designated confidential information related to this Agreement without the specific prior written approval from the other of the content to be disclosed and the form in which it is disclosed, except for such disclosures to the Parties' financing sources, creditors, beneficiaries, partners, members, officers, employees, agents, consultants, attorneys, accountants, and exchange facilitators as may be necessary to permit each Party to perform its obligations hereunder and as required to comply with applicable laws or rules of any exchange upon which a Party's shares may be traded. Notwithstanding the foregoing, nothing contained herein shall be deemed to restrict or prohibit JPA from complying with applicable law regarding disclosure of information, including but not limited to the California Public Records Act.

C. Publicity. The Parties share a common desire to generate favorable publicity regarding the Solar Facility and their association with it. The Parties agree that they may, from time to time, issue press releases regarding the Solar Facility and that they shall reasonably cooperate with each other in connection with the issuance of such releases. Each Party agrees that it shall not issue any press release regarding the Solar Facility without the prior written approval from the other of the content to be disclosed and the form in which it is disclosed, and each Party agrees not to unduly withhold, condition or delay any such approval. In addition, the Parties hereby agree that (i) the JPA may publicize that it is serving as a "solar host" for the Solar Facility; (ii) Provider may publicize that it is serving as the developer, owner and/or operator of the Solar Facility; and (iii) each Party may display photographs of the Solar Facility and disclose the nameplate capacity rating of the as-built Solar Facility in its advertising and promotional materials, provided that any such materials identify JPA as the solar host and Provider as the owner, operator and developer, of the Solar Facility and all information shall be consistent with this Agreement. Without limitation of the foregoing, Provider agrees to share with JPA, in digital format, any photographs and other schematics taken by Provider of the Sites and the Solar Facility, and further agrees that JPA may use such photographs and other schematics for the purpose of marketing and promoting JPA's operations.

21. Legal Effect and Status of Agreement.

A. JPA Not Operator. Neither JPA nor any Party related to JPA shall have the right or be deemed to operate the Solar Facility for purposes of Section 7701(e)(4)(A)(i) of the Internal Revenue Code.

B. Burdens/Benefits of Solar Facility Ownership. Notwithstanding any provision to the contrary under this Agreement, neither JPA nor any Party related to JPA shall (a) bear or be deemed to bear any significant financial burden if there is nonperformance by Provider under this Agreement, as the phrase "any significant financial burden if there is nonperformance" is used in Section 7701(e)(4)(A)(ii) of the Internal Revenue Code; or (b) be deemed to receive any significant financial benefit if the operating costs of the Solar Facility is less than the standard of performance and/or operation set forth in this Agreement, as the phrase "significant financial benefit if the operating costs of such facility are less than the standards of performance or operation" is used in Section 7701(e)(4)(A)(iii) of the Internal Revenue Code.

C. No Capital Lease; Forward Contract. The Parties acknowledge and agree that for accounting or tax purposes, this Agreement is not and shall not be construed as a capital lease and, pursuant to Section 7701(e)(3) of the Internal Revenue Code, this Agreement is and shall be treated by each Party as a service contract for the sale to the JPA of electric energy produced at alternative energy Solar Facility. Each of the Parties agrees that it will not dispute that (i) the transaction contemplated by this Agreement constitutes a "forward contract" within the meaning of the United States Bankruptcy Code and (ii) each Party is a "forward contract merchant" within the meaning of the United States Bankruptcy Code.

22. Miscellaneous.

A. Amendments. This Agreement may be amended only in a writing signed by both Provider and JPA or their respective successors in interest.

B. Notices. Any notice required or permitted to be given in writing under this Agreement shall be mailed by certified mail, postage prepaid, return receipt requested, or sent by overnight courier service, or personally delivered to a representative of the receiving Party, or sent by facsimile or email (provided an identical notice is also sent simultaneously by mail, overnight courier, or personal delivery as otherwise provided in this Section). All such communications shall be mailed, sent or delivered, addressed to the Party for whom it is intended, at its address set forth below. A Party may change its address by providing written notice to the other Party in accordance with this Section.

If to JPA:

Las Virgenes-Triunfo Joint Powers Authority
Attention: General Manager of the Administering Agent of the JPA
4232 Las Virgenes Road
Calabasas, CA 91302
Phone: 818 251-2100
Facsimile: 818 251-2159
Email: dpedersen@lvmwd.com

If to Provider:

Las Virgenes Solar 1, LLC
c/o Borrego Solar Systems, Inc.

Attention: CEO
1814 Franklin Street, Suite 700
Oakland, California 94612

With copy to:
Borrego Solar Systems, Inc.
Attention: General Counsel
1814 Franklin Street, Suite 700
Oakland, California 94612
Email: legalnotices@borregosolar.com

C. Non-Waiver. The failure, delay, or forbearance by either Party to exercise any of its rights or remedies under this Agreement or to provide written notice of any default to a defaulting Party, will not constitute a waiver of such rights or remedies. No Party will be deemed to have waived any right or remedy unless it has made such waiver specifically in writing. The waiver by either Party of any default or breach of any term, condition, or provision herein contained shall not be deemed to be a waiver of any subsequent breach of the same term, condition or provision, or any other term, condition or provision contained herein.

D. No Set-Off. Except as otherwise set forth herein, each Party hereby waives all rights to set-offs of amounts due hereunder. The Parties agree that all amounts due hereunder are independent obligations and shall be made without set-off for other amounts due or owed hereunder.

E. Intellectual Property. Nothing in this Agreement shall be construed to convey to JPA a license or other right to trademarks, copyrights, technology, or other intellectual property of Provider.

F. Severability. Should any provision of this Agreement for any reason be declared invalid or unenforceable by final and non-appealable order of any court or regulatory body having jurisdiction, such decision shall not affect the validity of the remaining portions, and the remaining portions shall remain in full force and effect as if this Agreement had been executed without the invalid portion.

G. Survival. Any provision of this Agreement that expressly or by implication comes into or remains in full force following the termination or expiration of this Agreement shall survive the termination or expiration of this Agreement.

H. Headings. The headings in this Agreement are solely for convenience and ease of reference and shall have no effect in interpreting the meaning of any provision of this Agreement.

I. Choice of Law. This Agreement shall be construed in accordance with the laws of the State of California (without regard to its conflict of laws principles). The venue for any dispute arising out of or relating to this Agreement shall be in the California County in which the Solar Facility is located.

J. Binding Effect. This Agreement and its rights, privileges, duties, and obligations shall inure to the benefit of and be binding upon each of the Parties hereto, together with their respective successors and permitted assigns.

K. No Partnership. This Agreement is not intended, and shall not be construed, to create any association, joint venture, agency relationship or partnership between the Parties or to impose any such obligation or liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act as or be an agent or representative of, or otherwise bind, the other Party.

L. No Third Party Beneficiaries. This Agreement is solely for the benefit of the Parties hereto and no right or cause of action shall accrue by reason hereof for the benefit of any third party not a party hereto, other than the Indemnitees and any Secured Parties.

M. Counterparts. This Agreement may be executed in counterparts, which shall together constitute one and the same agreement. Electronic, facsimile, or copies of signature pages shall have the same force and effect as originals.

N. Further Assurances. Upon the receipt of a written request from a Party, each Party shall execute such additional documents, instruments, estoppels, and assurances, and take such additional actions, as are reasonably necessary and desirable to carry out the terms and intent hereof, including but not limited to an Interconnection Agreement. Neither Party shall unreasonably withhold, condition, or delay its compliance with any reasonable request made pursuant to this Section.

O. Entire Agreement. This instrument and the documents referenced herein represent the full and complete agreement between the Parties hereto with respect to the subject matter contained herein and supersedes all prior written or oral agreements between said Parties with respect to said subject matter.

[Signature Page Follows]

IN WITNESS WHEREOF, the Parties have executed this Agreement on the Effective Date.

JPA:
Las Virgenes-Triunfo Joint Powers Authority

By: _____
Name:
Title:

PROVIDER:
Las Virgenes Solar 1, LLC

By: 1115 Solar Development, LLC, its sole member and manager

By: _____
Name:
Title:

Exhibit A

Definitions

1. "Agreement" or "PPA" shall have that meaning as set forth in the preamble of this Agreement.

2. "Annual Production Estimate" means, for the Solar Facility, the estimated energy production for a Contract Year as set forth in Exhibit B.

3. "Applicable Law" means, with respect to any person, any law, statute, rule, regulation, ordinance, treaty, order, decree, judgment, decision, holding, injunction, registration, license, guideline, Governmental Approval, consent or requirement of any Governmental Authority having jurisdiction over such person or its property, as any of the foregoing may be amended from time-to-time, and any corresponding provisions of any successor to the foregoing, together any rules or regulations promulgated under such successor.

4. "Assignment" shall have that meaning as set forth in Section 19(A) of the Agreement.

5. "Authorities Having Jurisdiction" shall mean the governmental organization, office or individual responsible for approving equipment, an installation or a procedure.

6. "Construction Conditions Precedent" shall have that meaning as set forth in Section 6(A) of the Agreement.

7. "Construction Start Deadline" shall have that meaning as set forth in Section 6(B) of the Agreement.

8. "Contract Year" means a period of twelve (12) consecutive months (except in the case of the first Contract Year which may be longer) with the first Contract Year commencing on the Commercial Operation Date and each subsequent Contract Year commencing on the anniversary of the first day of the first month following the Commercial Operation Date.

9. "Commercial Operation" means that (a) the Project is operating and able to produce and deliver Energy to JPA pursuant to the terms of this Agreement; (b) Provider has received all local, state and federal Permits and other approvals as may be required by Law for the construction, operation and maintenance of the Project, including approvals, if any, required under the California Environmental Quality Act for the Project and related interconnection facilities.

10. "Commercial Operation Date" means the date on which Provider achieves Commercial Operation for the Project.

11. "Commercial Operation Deadline" shall have that meaning as set forth in Section 6(C) of this Agreement.

12. "Cost Reimbursement Agreement" means the Cost Reimbursement Agreement by and between the Parties dated as of the Effective Date and attached hereto as Exhibit I.

13. "Days" shall mean calendar days, unless otherwise specified.

14. "Delay Liquidated Damages" shall have that meaning as set forth in Section 6(D) of this Agreement.

15. "Delivery Point" means each energy delivery point within the Site's electrical system on JPA's side of the Site's Distribution Utility meter, as designated in the applicable Distribution Utility Interconnection Agreement.

16. "Dispute" shall have that meaning as set forth in Section 15.

17. "Distribution Utility" means Southern California Edison.

18. "Distribution Utility Upgrades" shall mean the operation and maintenance payment charged by the Distribution Utility as well as the scope of work and associated costs that the Distribution Utility requires on the Distribution Utility side of the Distribution Utility meter in order for the Facility to interconnect to the Distribution Utility system.

19. "Due Date" shall have that meaning as set forth in Section 8(B).

20. "Effective Date" shall have that meaning as set forth in the preamble of this Agreement.

21. "Energy" means electrical energy measured in kWh.

22. "Energy Shortfall Amount" means an amount equal to the product of: (i) the Output Guarantee Rate, multiplied by (ii) the difference between the delivered Output for such Measurement Period and the Output Guarantee for such Measurement Period.

23. "Environmental Financial Incentives" means each of the following financial rebates and incentives that is in effect as of the Effective Date: (1) investment tax credits associated with the development, construction, ownership or operation of the Solar Facility, accelerated depreciation, and other financial incentives in the form of credits, reductions or allowances associated with the Solar Facility that may be applied to reduce any state or federal income taxation obligation, and (2) the right to claim federal income tax credits under Sections 26 or 48 of the Internal Revenue Code or any state tax law or income tax deductions with respect to the Solar Facility under the Internal Revenue Code or any state tax law. Environmental Financial Incentives do not include Green Attributes.

24. "Expiration Date" means the last day of the month that follows the twenty fifth (25th) annual anniversary of the Commercial Operation Date.

25. "Force Majeure" shall mean any event or circumstances beyond the reasonable control of and without the fault or negligence of the Party claiming Force Majeure. It shall include, without limitation, interruption or delay of the construction of the Solar Facility or failure or interruption of the production, delivery or acceptance of electricity due to: an act of god; war (declared or undeclared); sabotage; riot; insurrection; civil unrest or disturbance; military or guerilla action; terrorism; economic sanction or embargo; civil strike, work stoppage, slow-down, or lock-out; explosion; fire; earthquake; abnormal weather condition or actions of the elements; hurricane; flood; lightning; wind; drought; the binding order of any governmental authority (provided that such order has been resisted in good faith by all reasonable legal means); the failure to act on the

part of any governmental authority (provided that such action has been timely requested and diligently pursued); unavailability of electricity from the utility grid, equipment, supplies or products (but not to the extent that any such unavailability of any of the foregoing results from the failure of the Party claiming Force Majeure to have exercised reasonable diligence); and failure of equipment not utilized by or under the control of the Party claiming Force Majeure.

26. "Generation Meter" shall have that meaning as set forth in Section 12(A).

27. "Governmental Authority" shall mean the government of the United States of America, any other nation or any political subdivision thereof, whether state or local, and any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government (including any supra-national body exercising such powers or functions, such as the European Union or the European Central Bank).

28. "Governmental Approvals" shall mean any notices to, reports or other filings to be made with, or any Consents, registrations, permits or authorizations to be obtained from, any Governmental Authority.

29. "Green Attributes" shall mean any and all credits, benefits, emissions reductions, offsets and allowances, howsoever entitled, attributable to the generation of Output from the Solar Facility, and its displacement of conventional energy generation, that is in effect as of the Effective Date or may come into effect in the future. Green Attributes include but are not limited to Renewable Energy Certificates, as well as: (1) any avoided emissions of pollutants to the air, soil or water such as sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO) and other pollutants; (2) any avoided emissions of carbon dioxide (CO2), methane (CH4), nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride and other greenhouse gases (GHGs) that have been determined by the United Nations Intergovernmental Panel on Climate Change, or otherwise by law, to contribute to the actual or potential threat of altering the Earth's climate by trapping heat in the atmosphere; and (3) the reporting rights to these avoided emissions, such as REC Reporting Rights. Green Attributes do not include (i) any energy, capacity, reliability or other power attributes from the Solar Facility, (ii) Environmental Financial Incentives, (iii) fuel-related subsidies or "tipping fees" that may be paid to Provider to accept certain fuels, or local subsidies received by the generator for the destruction of particular preexisting pollutants or the promotion of local environmental benefits or (iv) emission reduction credits encumbered or used by the Solar Facility for compliance with local, state or federal operating and/or air quality Permits.

30. "Indemnified Party" shall have that meaning as set forth in Section 17(A).

31. "Indemnifying Party" shall have that meaning as set forth in Section 17(A).

32. "Indemnity Claims" shall have that meaning as set forth in Section 17(A).

33. "Insolation" means the amount of kWhs per square meter falling on a particular location, as published by the National Renewable Energy Laboratory.

34. "Insolation Data" shall mean the actual Insolation measured at the Site in kWh/m2 over a Contract Year.

35. "Initial Term" shall have that meaning as set forth in Section 2(A).

36. "Interconnection Agreement" means an agreement entered into by and between JPA and the Distribution Utility which agreement shall provide for (i) each Solar Facility to be interconnected with the Distribution Utility's electricity distribution system, (ii) for energy to flow from the Solar Facility to such system and (iii) for energy to flow from such system to the Project Sites, as applicable, under the provisions of all applicable Distribution Utility's tariffs.

37. "Internal Revenue Code" shall mean the Internal Revenue Code of 1986, as amended.

38. "JPA" shall have the meaning set forth in the preamble of this Agreement.

39. "JPA Suspension Rate" shall have the meaning set forth in Section 11(D).

40. "kWac" means kilowatt alternating current.

41. "kWdc" means kilowatt direct current.

42. "kWhac" means kilowatt-hour alternating current.

43. "License Agreement" shall have the meaning set forth in the Recitals of this Agreement.

44. "Measurement Period" shall have the meaning set forth in Section 4(B).

45. "Meter Data" shall have the meaning set forth in Section 12(D).

46. "Notice to Proceed" means as defined in Section 6(B).

47. "Outage" means as defined in Section 4(E).

48. "Output" means: the total quantity of all actual electrical power generated by the Solar Facility as measured by a Meter at the Delivery Point measured in kWhac. Output does not include the Green Attributes, Environmental Financial Incentives, RECs or REC Reporting Rights.

49. "Output Guarantee" shall have the meaning set forth in Section 4(B).

50. "Output Guarantee Rate" means as defined in Exhibit F.

51. "Parallel Energy Services" means to remain interconnected to and receive grid services.

52. "Party" shall have the meaning set forth in the preamble of this Agreement.

53. "Permits" means all government permits and approvals, regulatory or otherwise required for the construction, installation, completion and operation of the Solar Facility.

54. "Person" means any individual, corporation, partnership, joint venture, association, joint stock company, trust, trustee, estate, limited liability company, unincorporated organization, real estate investment trust, government or any agency or political subdivision thereof, or any other form of entity.

55. "Power Price" shall mean the per kWhac rate(s) as set forth on Exhibit B.

56. "Project" shall have that meaning as set forth in the Recitals of this Agreement.

57. "Provider" shall have the meaning set forth in the preamble of this Agreement.

58. "Purchase Option" shall have the meaning set forth in Section 9(A) of this Agreement.

59. "RECs" or "Renewable Energy Certificates" means renewable energy certificates related to and representing Green Attributes (also known as green tags, renewable energy credits, or tradable renewable certificates), which are tradable environmental commodities in the United States and represent 1 megawatt-hour (MWh) of electricity generated from an eligible renewable energy resource. These certificates can be sold and traded and the owner of the REC can claim to have purchased renewable energy.

60. "REC Reporting Rights" shall mean the right of a REC purchaser to report the ownership of accumulated RECs in compliance with federal or state law, if applicable, and to a federal or state agency or any other Party at the REC purchaser's discretion, and include without limitation those REC Reporting Rights accruing under Section 1605(b) of the Energy Policy Act of 1992 and any present or future federal, state, or local law, regulation or bill, and international or foreign emissions trading program.

61. "Reference Model" shall mean the PVsyst model set forth in Exhibit F used to generate the estimated performance of the Solar Facility.

62. "Relocation Site" shall have the meaning set forth in Section 11(C).

63. "Renewal Term" shall have the meaning set forth in Section 2(A).

64. "Secured Party" shall have the meaning set forth in Section 19(B).

65. "Site" or "Sites" (each a "Site", collectively the "Sites") means the portion of JPA's real property on which a Solar Facility is to be located pursuant to this Agreement and the License Agreement.

66. "Solar Facility" means the solar photovoltaic generation plant, together with all necessary inverters, ancillary plant and equipment with a target installation size expressed in kWdc and kWac to be installed at the Sites (collectively, "Solar Facility").

67. "Temperature Data" shall mean the actual ambient temperature measured at the Site in degrees Celsius over a Contract Year.

68. "Termination Value" shall equal the product of (i) the capacity in Watts DC of the system at the Site and (ii) the value per Watt due in a year or, at any point within such year, as set forth in Exhibit C.

69. "Term" shall have the meaning set forth in Section 2(A).

70. "Term Output Guarantee" shall have the meaning set forth in Section 4(B).

71. "Threshold Insolation" shall mean the P90 or 1.28 standard deviations below the mean value of the annual global horizontal insolation that makes up the Clean Power Research SolarAnywhere data set for the Site and is equal to 1934.8kWh/m^2.

72. "Threshold Ambient Temperature" shall mean two (2) degrees Celsius above the mean annual ambient temperature included in the Clean Power Research SolarAnywhere data set for the Site as used in the Reference Model and is equal to 19.15°C.

73. "Upgrade Estimate" shall have the meaning set forth in Section 4(G).

74. "Year 1 Output Guarantee" shall have the meaning set forth in Section 4(B).

Exhibit B

Site Power Price Chart

Contract Period, Months	Year	Price		Annual Production Estimate (kWh)
1-12	1	$0.05295	/kWhac	8,223,502
13-24	2	$0.05295	/kWhac	8,182,384.73
25-36	3	$0.05295	/kWhac	8,141,472.81
37-48	4	$0.05295	/kWhac	8,100,765.44
49-60	5	$0.05295	/kWhac	8,060,261.61
61-72	6	$0.05295	/kWhac	8,019,960.31
73-84	7	$0.05295	/kWhac	7,979,860.50
85-96	8	$0.05295	/kWhac	7,939,961.20
97-108	9	$0.05295	/kWhac	7,900,261.40
109-120	10	$0.05295	/kWhac	7,860,760.09
121-132	11	$0.05295	/kWhac	7,821,456.29
133-144	12	$0.05295	/kWhac	7,782,349.01
145-156	13	$0.05295	/kWhac	7,743,437.26
157-168	14	$0.05295	/kWhac	7,704,720.08
169-180	15	$0.05295	/kWhac	7,666,196.48
181-192	16	$0.05295	/kWhac	7,627,865.49
193-204	17	$0.05295	/kWhac	7,589,726.17
205-216	18	$0.05295	/kWhac	7,551,777.53
217-228	19	$0.05295	/kWhac	7,514,018.65
229-240	20	$0.05295	/kWhac	7,476,448.55
241-252	21	$0.05295	/kWhac	7,439,066.31
253-264	22	$0.05295	/kWhac	7,401,870.98
265-276	23	$0.05295	/kWhac	7,364,861.62
277-288	24	$0.05295	/kWhac	7,328,037.32
289-300	25	$0.05295	/kWhac	7,291,397.13

Exhibit C

Site Termination Values

Contract Period, Months	Year	Termination Value per Watt
1-12	1	$1.502
13-24	2	$1.394
25-36	3	$1.285
37-48	4	$1.176
49-60	5	$1.066
61-72	6	$0.956
73-84	7	$0.934
85-96	8	$0.910
97-108	9	$0.887
109-120	10	$0.862
121-132	11	$0.837
133-144	12	$0.811
145-156	13	$0.784
157-168	14	$0.757
169-180	15	$0.729
181-192	16	$0.700
193-204	17	$0.670
205-216	18	$0.639
217-228	19	$0.608
229-240	20	$0.575
241-252	21	$0.541
253-264	22	$0.506
265-276	23	$0.471
277-288	24	$0.434
289-300	25	$0.397

Exhibit D

Site Purchase Option Price

Purchase Option Price: $6,435,191.19	
End of Year 6:	$ 3,274,000.00
End of Year 10:	$ 2,893,000.00
End of Year 15:	$ 2,355,000.00
End of Year 20:	Fair Market Value
End of Year 25:	Fair Market Value

Exhibit E

Description of Solar Facility

[To be updated after preparation of final design.]

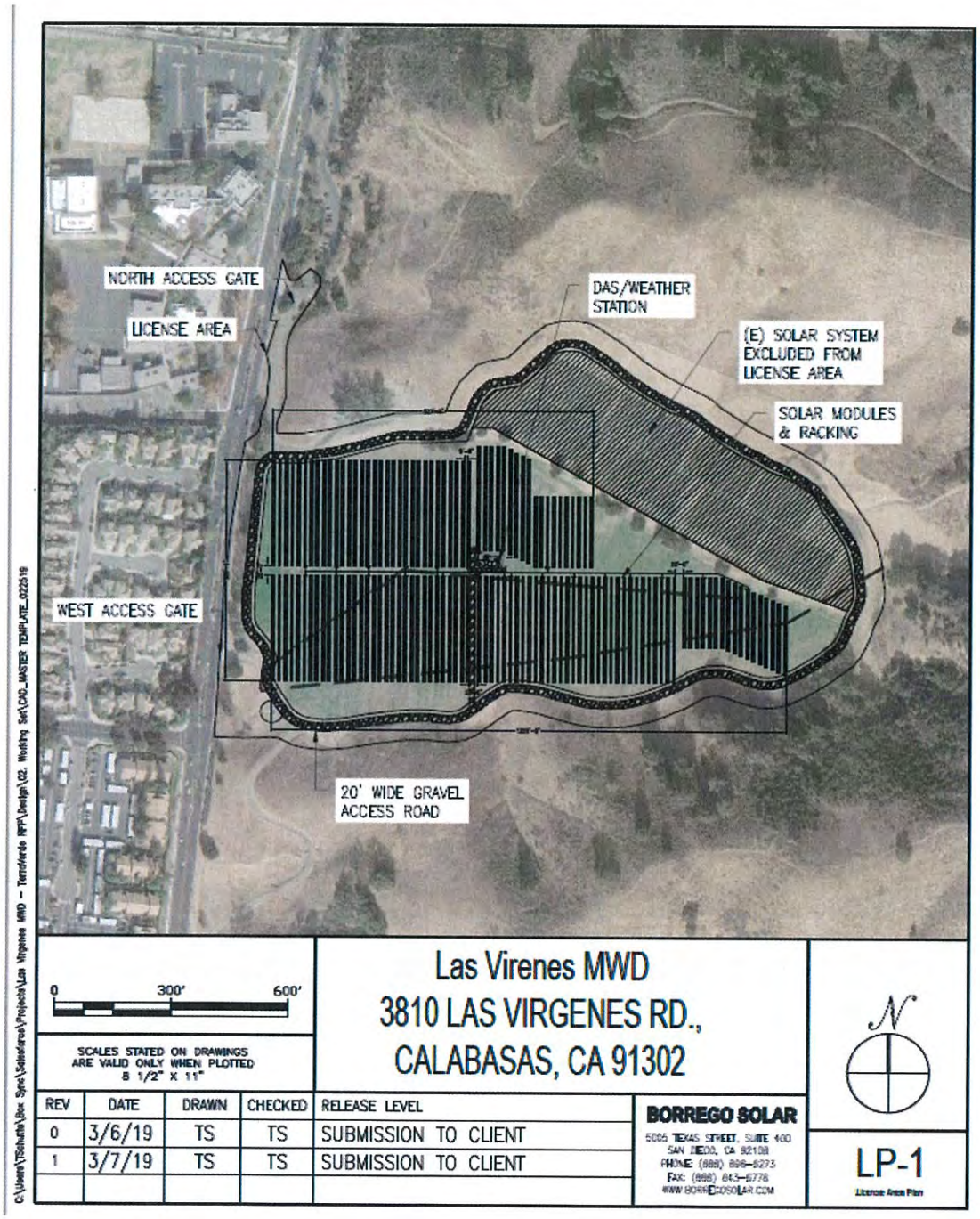


Exhibit F

Output Guarantee Details

Output Guarantee True-Up. The Parties agree that no Energy Shortfall Amount that may accrue during a given Measurement Period shall become due and payable until the end of such Measurement Period. At the end of each Measurement Period, Provider shall provide JPA with a report detailing the Solar Facility's actual Output (in AC kWh) for each Contract Year of the applicable Measurement Period. When providing the JPA with a true-up report, the Provider shall, upon the JPA's request, make reasonable efforts to explain the data, calculations, and the results, and shall make available the underlying data and calculations.

If the delivered Output (in AC kWh) for each Contract Year of the applicable Measurement Period is greater than the Output Guarantee for such Measurement Period, then no Energy Shortfall Amount shall be due to the JPA.

If, however, the delivered Output (in AC kWh) for each Contract Year of the applicable Measurement Period is less than the Output Guarantee for such Measurement Period, then the Energy Shortfall Amount shall be due the JPA.

Contract Period, Months	Contract Year	Output Guarantee Rate (per kWh)
1-12	1	$0.0265
13-24	2	$0.0281
25-36	3	$0.0297
37-48	4	$0.0314
49-60	5	$0.0330
61-72	6	$0.0348
73-84	7	$0.0365
85-96	8	$0.0383
97-108	9	$0.0401
109-120	10	$0.0420
121-132	11	$0.0439
133-144	12	$0.0458
145-156	13	$0.0478
157-168	14	$0.0498
169-180	15	$0.0518
181-192	16	$0.0539

Contract Period, Months	Contract Year	Output Guarantee Rate (per kWh)
193-204	17	$0.0561
205-216	18	$0.0582
217-228	19	$0.0605
229-240	20	$0.0627
241-252	21	$0.0650
253-264	22	$0.0674
265-276	23	$0.0698
277-288	24	$0.0722
289-300	25	$0.0747

See attached for the Reference Model.

Exhibit G

General Conditions and Technical Specifications

[ATTACHED BEHIND THIS COVER PAGE]

EXHIBIT G
GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS

This EXHIBIT G is a summary of the Scope of Work and is not all inclusive of terms and conditions of the Agreement.

Attachment A – Preliminary Drawings
Attachment B – Site Assessment Table
Attachment C – Preliminary Project Schedule
Attachment D – Construction Meeting Minutes Template
Attachment E – Change Form Template
Attachment F – Commissioning Schedule
Attachment G – Notice to Proceed for Pre-Construction Template
Attachment H – Notice to Proceed to Procurement & Construction Template
Attachment I – Manufacturers' Warranties
Attachment J – Site Preparation Requirements

1. PROJECT OVERVIEW

As set forth in detail below, Provider shall be responsible for supplying, at Provider's sole cost, all expertise, labor and materials necessary to construct, install and commission and operate the Solar Facilities, including but not limited to: planning, permitting, designing, engineering, procuring, delivering, installing, constructing, interconnecting, commissioning and operating as well as providing warranties and maintenance. Access to the Project Sites of the Solar Facilities shall be subject to the terms of the License and approval of the JPA.

Provider is generally responsible for the following activities: (a) project management including design, engineering, submittals, construction, interconnection, commissioning and Distribution Utility sign off; (b) procurement of all materials and equipment; (c) design and engineering including civil, structural, electrical, seismic and wind loading requirements and fire protection requirements; (d) permitting and environmental compliance with the current version of all applicable codes and standards; (e) Distribution Utility interconnection requirements compliance; (f) site preparations including but not limited to grubbing, clearing, grading, roads, dust control, drainage requirements, construction wastewater and storm water disposal, removing excess debris, all final site preparation, and all other requirements in Attachment J; (g) meters, monitoring, Data Acquisition System ("DAS"), and weather station; (h) production analysis and performance guarantee; (i) conformance to manufacturers' installation requirements and warranty terms; (j) acceptance testing, commissioning, interconnection signoff and Permission to Operate ("PTO") by the Distribution Utility; (k) construction closeout including punch list, as-built drawings / documents package, PV module washing, and site cleanup; (l) operation and maintenance for the term of the PPA; (m) Site security requirements; (n) safety plans and measures per JPA approval. In addition to these general responsibilities, the Provider shall be responsible for all additional requirements as set forth in the PPA and all Exhibits, including but not limited to this Exhibit G – General Conditions and Technical Specifications.

Provider shall also be responsible for providing JPA with copies of Provider's Operations and Maintenance ("O&M") manuals, testing reports, start-up procedures, warranties, guarantees, and commissioning reports. Provider shall execute all of its obligations in a manner which reasonably minimizes interference and inconvenience to the JPA. Provider shall regularly report status of Provider's execution of its obligations under this Agreement to the JPA.

2. GENERAL REQUIREMENTS

2.1 Project Management Provider shall act as the general contractor and is responsible for overall safety on each Project Site. Provider shall conduct all project management activities required to complete the Project, including coordination efforts with JPA's representative, the Distribution Utility, inspectors, permitting agencies, suppliers, sub-contractors, Provider's office and field Project staff and any other third parties that are involved in or impacted by the Project. The installation must be "turn-key", requiring a minimum level of supervision and project management by the JPA, including all materials, equipment and labor, completed and commissioned per the specifications and general conditions contained herein. All Distribution Utility related interconnection work, fees, and installations necessary to make the Solar Facilities operational will be the sole responsibility of the Provider in accordance with any requirements of the Distribution Utility.

2.2 JPA's Project Objectives The JPA requires that the Provider perform each of the following in accordance with the Agreement:

A. Ensure that construction activities and Project installation and operation are performed safely, comply with all applicable law, and do not result in any adverse effect on JPA staff, surrounding persons and property, existing facilities, local power quality, local data systems or daily

operations at any Project Site throughout the life cycle of the installation. Manage construction and operation activities so that they minimally disrupt the operations at each Project Site.

B. Create a definitive scope of work and project schedule for the project, and manage the entire project including but not limited to contracts, design, engineering, permitting, approvals, procurement, pre-construction, Distribution Utility interconnection, installation, testing, commissioning, performance validation, and on-going maintenance and operation per the scope of work and project schedule.

C. Design Solar Facilities to obtain maximum projected net savings and cash flow over the term of the PPA using proven technology that complies with the terms and conditions of the PPA as well as compliance to all relevant codes and regulations.

D. Implement Solar Facilities sized in compliance with the Distribution Utility's applicable rate structure for each Project Site and in compliance with all Distribution Utility requirements applicable to the Project.

E. Meet Project and financial incentive submittals and completion deadlines. Effectively manage the schedule and coordinate construction activities around JPA's other construction projects where applicable.

F. Ensure that all Project design and construction activities are coordinated with existing JPA facility operations and / or construction activities and are in compliance with JPA's work rules, safety requirements, and specifications at all times.

2.3 Communication Protocol Throughout the entire Project timeline, the representative selected by JPA will be Provider's source of contact regarding any and all Project related issues. At no time between the release date of the RFP and the Solar Facility commissioning date, shall Provider contact JPA directly without the stated permission of JPA's representative. Unless otherwise stated, JPA's representative will act as a liaison, facilitator and intermediary between Provider and JPA.

Unless otherwise stated in the Agreement Documents and subject to change by JPA, the Parties shall meet bi-weekly during the design phase of the Project and weekly during the construction phase of the Project to, among other things, review work performed to date and to be performed. At the request of the JPA, Provider shall ensure that SCE attends meetings as required to provide updates. Provider shall organize the meeting, prepare, and distribute meeting notes. Meeting minutes shall be based on the template in Attachment D and shall include a 3 week look-ahead schedule, RFI log, Change Order log and Submittal Log with 2 week look-ahead priority list(s). Meeting notes shall be updated during the meeting and distributed at the end of the meeting and JPA shall have five business days after JPA's receipt of such minutes to object to them in writing and provide corrections in writing. A quorum of meeting attendees will be named at the first meeting. The named quorum shall be in attendance in all Project meetings. A pre-construction meeting shall be held prior to any work being performed on the site with all required parties.

2.4 Solar Facility Sizing It is the sole responsibility of the Provider to ensure that the sizing of the total installed system capacity per Project Site (kW DC / kW AC) achieves the Annual Production Estimate per Solar Facility. The total installed system capacity per Project Site shall not increase or decrease the Annual Production Estimate without prior written approval of the JPA.

2.5 Incentives Unless specifically stated otherwise in other Agreement Documents, Provider shall prepare and submit to all applicable agencies, on behalf of JPA, or assist JPA in doing so directly, all

applications, proof of progress submittals, and claim forms and documentation necessary for any environmental or financial incentives and rebates; provided that JPA shall have the opportunity to review, comment on, and approve all such applications and documentation prior to submission by Provider. If JPA shall decide to prepare and submit such documents, Provider will coordinate and provide JPA promptly upon JPA's written request all documents reasonably necessary for JPA to do so, including any application submitted by JPA to qualify the Project as a "Qualified Facility" under pertinent rules and regulations of the Federal Energy Regulatory Commission or any other governmental authority. Provider shall not charge any additional fee for its services. Unless stated otherwise in other Agreement Documents, JPA shall pay for all fees required to file the applications.

2.6 Physical Site Investigation & Project Feasibility Assessment Provider shall read and become knowledgeable with all documentation concerning the Project Sites included in the RFP package, and visit the Project Sites to assess its conditions and logistics, including but not limited to all Distribution Utility interconnection related requirements. Provider shall conduct feasibility and configuration assessments, environmental assessments, and all other inspections of the Project Site(s) to determine that the Project Sites can support the installation and interconnection of the Solar Facilities. Provider must visit the Project Sites to ascertain site conditions, accuracy of provided drawings and feasibility of design.

Provider is responsible for the upgrades to the existing electrical system required to accommodate the Solar Facilities installation and interconnection, and is to include those changes in their scope, price and design drawings. Provider shall ensure the existing Project Sites' electrical distribution equipment including the main switchboard and Distribution Utility transformer will support the interconnection of each Solar Facility. Provider shall confirm that each Solar Facility is interconnected to the correct meter at each Project Site by validating the meter and service account identification numbers (SAID) with the Distribution Utility.

The JPA operates under a number of environmental permits issued by various agencies. If due to an action, inaction or negligence by the Provider the JPA becomes subject to non- compliance penalties, the cost of such penalties shall be borne by the Provider.

Provider shall identify if any third party site assessments are required and be responsible for obtaining all required studies at their sole cost and expense. Provider shall assume any and all costs and risks associated with physical Project Site conditions and real estate constraints. Reports which may be required to be obtained by Provider at the Provider's sole cost include, but are not limited to:

- Structural Report
- Soils/Geotechnical Report
- Environmental Study
- Title Reports / ALTA Surveys
- Topographic Surveys
- Underground Utility Survey
- Glint and Glare Study
- Arc Flash Study

These reports must be obtained when requested by the JPA or any other Governmental Authority having jurisdiction. Although the JPA may provide historical information regarding the Sites, the JPA makes no representation as to the accuracy of the information about the Project Sites provided in the RFP package or otherwise, including data, drawings and reports developed by third parties. Provider shall rely solely on its own due diligence to discover and confirm existing conditions at the Project Sites. Provider shall report any discovered and previously unknown site conditions of a substantial nature.

2.7 **Permitting, Codes, Regulatory Compliance** Provider shall obtain, oversee and adhere to all required permissions for Project construction and operation by obtaining approvals from all Governmental Authorities having jurisdiction over the Project, including, but not limited to: the permitting agency, the Distribution Utility, incentive authorities, the California Energy Commission, fire safety, California Occupational Safety and Health Administration ("OSHA"), right-of-way permits, easement agreements and other codes and best practices. Specifically, the Provider shall obtain and submit all documents to achieve and maintain permission to operate with all required Governmental Authorities. In addition to stamped and approved plans, Provider shall provide the JPA installation compliance confirmation letters from all authorities having jurisdiction within 5 days of receipt.

2.8 **Procurement** Provider shall procure all equipment and services required for Project design, construction, commissioning, system monitoring, warranties and operation and maintenance and as described in this Agreement and as shown in the JPA-approved final design engineering drawings, specifications and data sheets. Any proposed changes or substitutions must be presented to the JPA in standard submittal format with detailed explanations and instructions for review, comment and approval. JPA approval of any of the submittals provided by Provider, including drawings, does not excuse the Provider from their responsibility to meet all safety requirements, applicable codes and standards requirements, requirements of all Governmental Authorities and the requirements of the Agreement including this Exhibit G.

2.9 **Construction** Provider shall conduct all construction and construction management work per the Project scope, schedule and per the requirements of this Agreement. Any proposed changes that represent a deviation from scope or schedule must immediately be brought to the JPA's attention for review. All work must be performed and supervised by skilled workers trained and experienced in the installation of photovoltaic solar systems in accordance with equipment manufacturers' installation requirements. Provider shall effectively manage the schedule and coordinate construction activities around the JPA's other construction projects where applicable.

2.10 **Commissioning** Provide r shall conduct all activities required for proper testing and commissioning of the Solar Facilities and any related installations / systems. Commissioning will include testing for all systems to ensure proper operations per the design standards and testing parameters and required to verify that the system is functioning as expected within acceptable parameters and as designed at a nameplate capacity and first year of operation production capacity adjusted for actual weather conditions consistent with the requirements of the Agreement. Provider shall manage all necessary final inspections with all Governmental Authorities having jurisdiction over the Project, the Distribution Utility, JPA representatives, and any other required inspectors. Provider shall also be responsible for completing the Commissioning Schedule template in Attachment F and submitting it to the JPA's representative for review and approval. Provider will notify JPA no less than five (5) days prior to the commencement of testing and JPA and / or its representative will have the right to observe all such tests. As part of the commissioning activities, Provider must confirm that no negative impacts are experienced by existing facilities that connect or interface with the new installations and systems.

2.11 **Distribution Utility Interconnection** Provider is responsible for coordinating and implementing all requirements related to the interconnection of the Solar Facilities with the Distribution Utility, which shall include Distribution Utility provided and installed facilities and JPA provided and installed facilities, at Provider's sole cost and expense. Provider will coordinate with the Distribution Utility and the JPA to meet all of the milestones for the Project required by any Interconnection Agreement. Provider is responsible for compliance with all milestones, including payment milestones to the Distribution Utility for design and installation services provided by the Distribution Utility. Provider shall be responsible for obtaining written Permission to Operate for the Solar Facilities from the Distribution Utility and activate the system to begin generating power in compliance with this Agreement. In addition, Provider shall be

responsible for all on-going terms, obligations and costs described in the Interconnection Agreement, and any other necessary permit signoffs from any Governmental Authorities having jurisdiction over the Project, to operate the Solar Facility in parallel with the Distribution Utility grid. For the purposes hereof, **"Interconnection Agreement"** means an agreement entered into by and between City and the Distribution Utility which agreement shall provide for (i) each Solar Facility to be interconnected with the Distribution Utility's electricity distribution system, (ii) for energy to flow from each Solar Facility to such system and (iii) for energy to flow from such system to the Project Sites, as applicable, under the provisions of the Distribution Utility's tariff.

Provider shall also be responsible for coordinating the desired rate tariff changes with the Distribution Utility for each Solar Facility. Desired rate tariffs for each Distribution Utility meter are defined in the Site Assessment Table. Provider will be responsible for ensuring that each Solar Facility meets the requirements for inclusion in the desired rate tariffs and will promptly inform the JPA if there is any discrepancy between such requirements and the specifications for each Solar Facility set forth in this Agreement. Rate changes shall occur as soon as possible following Permission to Operate. Provider shall be responsible for ensuring that the rate tariff change has taken place for each Distribution Utility meter and providing confirmation of the rate tariff change to the JPA.

3. **ENGINEERING AND DESIGN REQUIREMENTS** Provider shall, at its own cost and expense, (i) design, prepare and cause to be sealed all Drawings and Engineering Documents, and perform engineering studies and estimates and attend meetings as may be required (or arrange for design and engineering pursuant to a subcontract executed in accordance with this Agreement), for the construction of the Project and interfaces required by the Distribution Utility including, without limitation, sizing of equipment, communication systems and components, preparing specifications and calculations for equipment and material to be included in the Project, completing the Work in accordance with the this Agreement, providing administration and other services and items required to complete and deliver to JPA and Distribution Utility the design and Engineering Design Packages, calculations, studies, and Drawings necessary to construct a fully integrated and operational Project, and (ii) provide services, attend meetings and prepare all necessary documents and permit applications required to obtain all Governmental Approvals, including, without limitation, coordinating with the Governmental Authorities, the Distribution Utility and other agencies regarding Governmental Approvals necessary for the completion of the Project, completing the permitting process beginning from the permit application through to final approval and receipt of all Applicable Permits, all in accordance with this Agreement and it's Exhibits, Applicable Law, Governmental Approvals, JPA Requirements, Distribution Utility requirements, Engineering Design Packages, Industry Standards, the actual condition of the Project Site(s) and all requirements to be sufficient, complete and adequate in all aspects to enable the Project to achieve the Annual Production Estimate and a minimum 25 year design life.

3.1 **Design Codes** In addition to the codes cited in Section 16010 of the Construction Specification Institution, the Project shall be designed and installed in accordance with the latest edition of all applicable codes, standards, and recommendations of the following agencies:

- ACI – American Concrete Institute
- AISC – American Institute of Steel Construction
- ANSI-American National Standards Institute.
- ASCE-American Society of Civil Engineers
- ASME-American Society of Mechanical Engineers
- ASTM – American Society for Testing and Materials
- CAL OSHA-California /Occupational Safety and Health Administration

- Caltrans – California Department of Transportation
- CBC-California Building Code
- ETL-Electrical Testing Laboratories.
- IEEE-Institute of Electrical and Electronic Engineers
- ICEA-Insulated Cable Engineer's Association.
- IAEI-International Association of Electrical Inspectors.
- IPMVP- International Performance Measurements and Verification Protocol.
- NFPA-101-National Fire Protection Association. (Life Safety Code)
- NEMA-National Electrical Manufacturers Association.
- NESC-National Electrical Safety Code.
- NETA-National Electrical Testing Association.
- NEC -National Electrical Code
- UL-Underwriters Laboratories
- CEC-California Electrical Code
- Distribution Utility Manuals and Standards

3.2 General Requirements

3.2.1 Licensing

(a) In all cases, engineers are to be properly licensed by the State of California.

(b) Electrical, civil, geotechnical, structural and other engineering designs and reports are to be stamped and signed by a licensed engineer.

3.2.2 Orientation and Shading

(a) Project will have a minimum shade free window between the hours of 10am and 4pm (solar time) on the winter solstice.

(b) Orientation of the array shall be optimized for maximum financial benefit but in all cases with an azimuth between 90 and 270 degrees unless otherwise explicitly approved by JPA in writing.

(c) The Provider shall provide a PVSyst report at every stage of the design that shows that the System design and installation will meet the Annual Production Estimate.

(d) Inverters shall not be placed in locations subject to exposure to direct sunlight between the hours of 10am to 4pm. Where inverters must be placed in locations that would otherwise be subject to direct exposure to sunlight during this window of time, they shall be provided with shade coverings or otherwise protected from continuous exposure to the sun.

3.2.3 Site and General System Requirements

(a) PV arrays shall require a study, recommendations and stamp and sign off from a licensed structural and geotechnical engineer.

(b) All roads shall be designed and installed for all weather access.

(c) All conductors shall be in conduit. Provider shall not direct bury conductors unless explicitly approved by JPA in writing. All conduits shall be installed according to the requirement of the NEC and all Governmental Authorities.

(d) Intermediate Metallic Conduit (IMC), Schedule 80 PVC or approved equal shall be used on all above ground installation locations susceptible to risk of damage or vandalism during construction or in operation. All below grade horizontal bends and vertical bends shall be long radius elbows. Bending of straight PVC conduit to avoid installation of long radius elbows will not be allowed.

(e) Equipment pads shall be protected by bollards where they are at risk for collision damage in the judgment of JPA. Bollards shall be permanent unless removable bollards are required to facilitate access to equipment.

(f) Provider shall provide erosion control, weed abatement, and security for the Site throughout construction.

(g) Provider shall be responsible for creating and performing all requirements of a Storm Water Pollution Prevention Plan ("SWPPP"), dust control plan, pollution mitigation plan, and all other plans required by all Governmental Authorities. At a minimum, any earthwork-related or fine grading activities are to be conducted in the morning to avoid potential impact of the afternoon winds with construction-related fugitive dust.

(h) Ground mounted PV arrays shall be fenced in accordance with the NEC, NESC and requirements of the Governmental Authority and shall include provisions for at least one locking gate. Fencing around ground mount installations shall provide for a sixteen (16') foot wide clearance to the PV modules to allow for vehicular access and limit shading impact on the system.

(i) If adequate site fencing or equivalent is not in place, inverter pads, battery equipment pads, disconnect switches and all other equipment determined by Owner to require limited access shall be fenced. Fencing shall be eight (8) foot high and two (2) inch mesh chain link galvanized steel fence where in accordance with all local requirements.

(j) Locks for all gates and combiner boxes to be provided by Provider but must be approved by JPA prior to procurement. All gates shall include provision for both JPA and Provider locks to allow for either entity to access the Site during construction.

(k) Equipment pads shall be provided with two (2) 120VAC, 20A GFCI receptacles.

(l) The recommended fastener type shall be submitted with the Engineering Design Package.

(m) The height of ground mounted arrays shall be a minimum of two (2) feet above grade.

(n) The Provider will evaluate whether the Site is in a floodplain and take appropriate precautions to prevent water damage to the Project, including determining and installing the PV arrays, inverters, combiner boxes and all other materials to be used in the ground mounted infrastructure at the appropriate height above grade to be above the 1-percent-annual-chance flood elevation.

(o) Lighting requirements for array locations shall be determined by the Provider but must be approved by the JPA during design. Any lighting locations and fixture specifications shall be mutually agreed to.

(p) An arc flash study shall be performed by Provider and all required equipment labeling, fault current and coordination analysis, and recommendations for proper personal protective equipment (PPE) shall be followed in accordance with the results of the arc flash study.

3.2.4 Wiring

(a) All conductors #8 AWG or smaller shall be copper. Code compliant aluminum conductors may be used for conductors larger than #8 AWG. All wiring that interfaces with the JPA-owned 480V panelboard feeding the JPA's pump shall match existing type and size.

(b) Grounding Electrode Conductors (GEC) shall be copper.

(c) Ground lugs shall be mechanical or irreversible crimp and acceptable for copper conductor termination.

(d) All wiring shall be minimally rated to handle the voltage and current of the designed system.

(e) All termination equipment shall be rated for the conductor type, temperature, current and voltage of the conductor being terminated.

(f) PV module string wire shall be PV Wire and be appropriately rated for UV exposure where required.

(g) Wiring in conduit or below ground shall be listed and labeled by a nationally recognized testing laboratory (NRTL) in accordance with Underwriters Laboratories standards for its purpose and location.

(h) Where exiting from the ground, all conduits shall enter enclosures from below and be made watertight by sealing with silicone sealing compound.

(i) Intermediate Metallic Conduit (IMC), Schedule 80 PVC or approved equal shall be used on all above ground installation locations susceptible to risk of damage or vandalism during construction or in operation.

(j) All DC wire, other than panel-to-panel wire in a string that is not spanning a gap more than 3 inches wide, shall be located in conduit.

(k) All conductors used for communication will be shielded cable with a drain.

(l) Communications wiring shall be located in separate conduits from the high voltage DC and AC wiring with sufficient separation to prevent interference.

(m) Unless otherwise approved by the JPA in advance, modules shall be grounded with hardware. Module grounding shall be in accordance with all requirements of the NEC and Governmental Authority.

(n) Locking connectors shall mate with PV module terminations and shall be certified compatible with the PV module manufacturer provided locking connector by the chosen connector manufacturer.

(o) The PV System shall be equipped with DC arc-fault protection in accordance with the NEC.

(p) PV System DC wiring shall be protected by overcurrent protection rated for DC circuits and marked by the manufacturer for use in PV systems. Fuses shall be listed and labeled by a nationally recognized testing laboratory (NRTL) in accordance with Underwriters Laboratories standard UL 2579.

(q) Total DC voltage drop shall be limited to 2% unless otherwise explicitly approved by JPA in writing. The circuit shall be defined as all wiring from the module junction box to the DC input terminals at the inverter. Provider shall account for all horizontal and vertical distances and all wire gauge/raceway transitions.

(r) Total AC voltage drop shall be limited to 2% unless otherwise explicitly approved by JPA in writing. The circuit shall be defined as all wiring from the inverter output to the Delivery Point. Provider shall account for all horizontal and vertical distances and all wire gauge/raceway transitions.

(s) Geotechnical studies must include soil corrosivity and thermal resistivity testing and evaluation. All work must include consideration for the results of the testing and evaluation.

3.2.5 Electrical Tie-In

(a) The Generation Meter shall be identified on the preliminary and final drawings and shall be located within ten (10) feet of the Delivery Point unless an alternative location is approved in writing by the JPA.

3.2.6 Structural

(a) Equipment pads shall be a minimum of 6" of concrete reinforced at 12" intervals with #5 rebar unless otherwise directed by the structural engineer. Equipment pad layouts shall include adequate spacing to accommodate maintenance activities for all equipment.

(b) Structural engineers are to specify grade of steel used in all support structures. Mill certifications showing the identification of the steel to be used on the Project and the quality thereof shall be provided to JPA. Mill certifications shall be checked by Provider prior to accepting delivery of any steel.

(c) Where enclosures will be mounted vertically to array structural posts or other supports, two (2) feet minimum ground clearance and appropriate working clearances as required per NEC shall be maintained. In no case shall equipment locations create shade on the array between the hours of 10am-3pm on December 21.

(d) Structural engineers shall determine code requirements for seismic, wind and snow design loads and the Project shall be designed and installed in accordance with the latest edition of all applicable codes and standards.

3.3 **Engineering Design Packages** Provider and its subcontractors (as applicable) shall prepare and submit to JPA for their review and approval all drawings, assessments, reports, specifications and all other necessary documents setting forth in detail all requirements for the construction of the Project. Provider shall prepare preliminary, 50%, 90% and 100% Engineering Design Packages as described herein. All engineering and installation drawings shall comply with current construction standards, codes and regulations, and adhere to all requirements of this Agreement. The system design will comply with all applicable laws and regulations. JPA approval of any of the submittals provided by Provider, including drawings, does not excuse the Provider from their responsibility to meet all safety requirements, applicable codes and standards requirements, requirements of all Governmental Authorities and the requirements of the Agreement including this Exhibit G.

Preliminary and 50% Engineering Design Packages shall at a minimum contain the following information:

- Drawings depicting at a minimum:
  - overall system layout
  - the tilt and azimuth for all arrays
  - the location and sizing of all PV arrays
  - the location of all major equipment including but not limited to inverters, transformers, disconnects, batteries, meters.
- Product data sheets and copies of manufacturers' warranties for all major pieces of equipment.
- Completed Site Assessment Table in native and PDF formats.
- PVSyst production modeling report in PDF format and 8760 output file in MS Excel format. The production model report and 8760 output files must be in the same format and use the same assumptions as those used to finance the project.

All other Engineering Design Package submittals shall at a minimum contain the following information:

- A full set of drawings
- All required drawings, assessments, and reports, signed and stamped by the Engineer of Record.
- Full details of the mounting system design including snow, wind and seismic considerations and calculations as required.
- Production models for each Site in both PDF and Microsoft Excel 8760 formats. The production model shall use the same assumptions, be in the same format and use the same modeling software for each revision unless otherwise agreed to by the JPA.
- Product data sheets and copies of manufacturers' warranties for all major pieces of equipment.
- Completed Site Assessment Table in native and PDF formats.
- Microsoft Project or equivalent construction schedule (providing Gantt chart output) showing milestones, equipment order and delivery dates, and staffing requirements. Specific milestones such as conduit installation completion, material arrival dates, Interconnection date, and commissioning timeline, shall be highlighted.
- A list of those changes made from the original proposal with the reasons therefor.

In addition, a complete Project Execution Plan for each Site shall be provided to the JPA for review which shall at a minimum address the following:

- Material storage location
- Lay-down and layout yard location
- Site office location

- Access and mobilization
- Crane locations and traffic control
- Method of installation
- Human resources and staffing
- Communications
- Anticipated project risks

This plan shall be reviewed and approved by the JPA prior to any work being performed on the Site(s).

The Engineering Design Packages will be reviewed by the JPA. Comments shall be delivered to Provider within 10 business days of submission for review. Ensuring the Project is in compliance with all requirements and will be installed to meet all requirements of this Agreement remains the sole responsibility of the Provider.

3.4 **Design Drawings** A drawing summary list shall be maintained by the Engineer of Record for tracking drawings and revisions thereof over the design/construction period and the list shall be provided to JPA on a bi-weekly basis or as requested. All drawing submittals shall be according to the following:

3.4.1 Format

(a) Any changes in the Engineering Design Packages from one JPA submittal to the next shall be clouded.

(b) Redlines shall be maintained on a not more-than-weekly basis. As-built drawings shall be completed in a reasonable amount of time following the Governmental Authority final inspection and sign off.

3.4.2 Content All drawings shall at a minimum include the site address, JPA logo and project name in the title block. At a minimum all Drawing submittals shall include the following:

(a) **Title Page.** Information on the title page shall include, but not be limited to the following:

- Location of the Site.
- System size: This shall include kWdc and kWac.
- Area of installation: Area, in square feet or acres as appropriate, of area that the installation encompasses.
- PV module part numbers and quantities.
- Inverter part numbers and quantities.
- Engineer of Record block.
- Index of drawings.
- Benchmarking / survey control data

(b) **Single Line Diagrams/layout page.** The single line diagrams shall accurately depict the physical electrical connections (i.e. quantity, type, and size of conductors, quantity, size, and type of conduit) between all electrical equipment used in the system. Information on the single line diagrams shall include, but not be limited to the following items:

- Location of Generation Meter.
- Location of Distribution Utility Meter.
- Location of Net Generation Output Meter.
- PV Modules per string.
- Number of strings for each combiner box.
- String map per array or subarray.
- Depiction of the wiring and fusing in all disconnects.

- Wire type, size and quantity used for each run.
- Total wire length for each run and associated voltage drop calculations.
- Conduit size and quantity of wires in each conduit for each run.
- All overcurrent protection sizing.
- Monitoring Data communications and power wiring.
- Lighting wiring.
- Interconnection tie-in scheme.
- Distribution Utility meter number and SAID.
- Switchgear and transformer sizing.
- Complete electrical calculations .
- Make and model of all equipment.

(c) **Electrical Site Plan and details**. Information on the electrical layout shall include, but not be limited to the following items:

- Plan view of locations of all electrical equipment
- Elevation views of all electrical equipment
- Locations of conduit runs

(d) **Grounding system design including connection points and conductor size.** All electrical equipment shall be depicted, including their capacity/rating, manufacturer, part number, quantity and reference designator where applicable. Examples of equipment shall include but not be limited to the following:

- PV Modules
- Inverters
- Combiner Boxes
- Wire (gauges and quantity)
- Transformers
- Switchgear
- DC & AC Disconnects
- Overcurrent protection
- Data Acquisition System (DAS)
- Main Switchboard
- Meters
- Distribution Panels
- MET (Meteorological) Stations

(e) **Site Layout Page(s).** Information on the site plans shall include, but not be limited to the following items:

- Detailed solar array layout
- Equipment pad designs
- Locations of all equipment
- Locations of monitoring and security equipment
- Location of the point of interconnection
- Fire access requirements
- American's with Disabilities requirements
- Location of project lighting additions
- Locations and sizing of spare conduits
- Safety label details (including, but not limited to, arc flash)

- All civil work details

4. **EQUIPMENT** The Solar Facilities are intended to be in operation for a minimum of 25 years, therefore, the life cycle costs (capital expenditures and operating and maintenance expenses) for all installations and systems must be considered in selection criteria for all materials and equipment. Provider shall purchase and cause to be delivered to each Project Site all equipment and materials required for the Project and as described in the JPA-approved final design engineering drawings, specifications and data sheets and as required to construct a fully functioning Project. Any proposed changes or substitutions must be presented to the JPA in standard submittal format with detailed explanations and instructions for review, comment and approval. Minimum requirements for equipment are described below. JPA approval of any of the submittals provided by Provider, including drawings, does not excuse the Provider from their responsibility to meet all safety requirements, applicable codes and standards requirements, requirements of all Governmental Authorities and the requirements of the Agreement including this Exhibit G.

4.1 **Standards** All components shall be designed, manufactured, tested and listed in accordance with the latest applicable standards of NEMA, ANSI, NEC, IEC and UL. Provider shall verify listing and l abeling of equipment by a Nationally Recognized Testing Laboratory (NRTL) prior to installation. In all cases NEC and Governmental Authority rules shall apply.

4.2 **Factory Testing** Any equipment that is required to be factory tested by an applicable standard shall be accompanied by the results of those factory tests, and further those results will be submitted to the JPA as part of the Final Binder.

4.3 **Acceptance and Care** Equipment shall be stored, handled and installed in accordance with manufacturer's requirements. Material received shall be identified by serial number, a report prepared and that report including make, model and serial numbers of the material and equipment received (if applicable) shall be forwarded to JPA within ten (10) days of the equipment being received.

4.4 **NEMA Rating** If any Project Site is within two (2) miles of any body of water or one (1) mile from any body of salt water, inverters and combiner enclosures shall be NEMA 4X in stainless steel and all enclosures exposed to the elements shall be NEMA 4X.

4.5 **Nameplates and Labeling** All equipment, panels, boxes and associated equipment shall be clearly labeled with engraved phenolic nameplates. Unless otherwise explicitly approved by JPA in writing, nameplates shall be red background with 3/8" or greater white letters. Provider shall submit the proposed nameplates with desired labeling for approval prior to installation. The following minimum labeling shall be installed:

(a) Install engraved signs for instruction and warning identifying that a solar PV system is operational on the premises at appropriate locations and that there is potentially multiple power sources on the premises – submit wording and location to JPA for approval. In all cases NEC requirements shall dictate.

(b) Provide identification of all DC power circuits on switches and clearly identify individual PV module strings in DC combiner boxes. Use appropriate wire color codes (i.e. Red & Black) for negative and positive circuits.

(c) PV modules must include serial numbers in such a position as to be easily visible when installed.

(d) Install all signage required by NEC Article 690 of the most recently adopted version of the NEC and per the requirements of the CA Fire Marshall PV Specifications.

(e) Install all other required signage per NEC (including arc flash requirements per NEC Article 110).

(f) Inverters shall have engraved phenolic labels with shutdown and restart instructions. These labels shall be on the outside of the inverter.

4.6 **Products – Approved Manufacturers and General Product Requirements** Only products that meet the requirements below shall be used in the construction of the Project, unless otherwise explicitly approved in writing by JPA.

Approved PV Modules.
JA Solar JAM72S09 375-395/PR, Hanwha Q.Peak Duo L-G5.2 380-395

Approved PV Module Manufacturer
JA Solar, Hanwha

JPA's General Guidelines for PV modules

- Thin-film, concentrating PV, etc. PV technologies are not accepted by JPA.
- All PV modules must be included on any required rebate-related approved module list as well as on the California Energy Commission's (CEC's) List of Eligible Photovoltaic Modules.
- All PV modules must have anti-reflective (AR) glass surfaces.
- All PV modules used on the Project shall include a minimum twenty five (25) year linear power output warranty and a minimum 10 year product warranty.
- All array layouts, PV module related submittals, and PV module data sheets must include cell and module efficiency ratings and define the guaranteed production degradation over the warranted life of the module.
- Provider will provide flash test data for all PV modules to JPA in MS Excel format upon procurement of PV modules. JPA, at its sole discretion, may randomly select up to fifty (50) PV modules for delivery to a third-party for quality verification testing. The costs of such verification testing shall be the responsibility of JPA.

Approved Inverter Hardware. Central and string level inverters up to 1500VDC are allowed. Micro-inverters are not allowed. All inverters must be included on any required rebate-related approved inverter list as well as on the California Energy Commission's List of Eligible Inverters. Inverters must meet all Distribution Utility requirements. All inverters must have a minimum 10 year warranty.

Approved Inverter Manufacturer
Chint Power Systems

Inverter Manufacturer Preventative Maintenance and Support Services. JPA requires preventative maintenance support services which may be provided by the Provider or the inverter manufacturer, as well as comprehensive and highly responsive repair service offerings. In addition, JPA will be monitoring the inverters' performance remotely, and require that the inverters utilize an open interface and documented protocols for third party monitoring software.

Approved Mounting Hardware
Mounting or tracking solutions or systems not listed by a nationally recognized testing laboratory (NRTL) may be submitted to JPA for review and approval. JPA requires that all mounting solution

descriptions clearly identify the mounting hardware and any engineering services related to the mounting solution. Proposed mounting systems or tracking solutions should be supplied with full specifications, warranty details, etc.

Approved Mounting Hardware Manufacturer.
Array Technologies, Inc., NEXTracker, Inc.

Approved Data Acquisition System (**"DAS"**)
AlsoEnergy

Performance Monitoring and Reporting Service Provider
AlsoEnergy

Inverter Monitoring Provider
[TO BE ADDED by Provider prior to executing Agreement]

Weather Station Requirements

- Module temperature sensor
  [TO BE ADDED by Provider prior to executing Agreement]
- Irradiance sensors (one horizontal and one installed at each unique azimuth and tilt of the arrays)
- [TO BE ADDED by Provider prior to executing Agreement]
- Ambient temp sensor
  [TO BE ADDED by Provider prior to executing Agreement]
- Wind speed and direction sensor
  [TO BE ADDED by Provider prior to executing Agreement]

Load Side Interval Meter
[TO BE ADDED by Provider prior to executing Agreement]

Generation Meter
[TO BE ADDED by Provider prior to executing Agreement]

Approved DC Safety Switches
[TO BE ADDED by Provider prior to executing Agreement]

Approved Grounding Lugs
[TO BE ADDED by Provider prior to executing Agreement]

5. **COMMUNICATIONS AND MONITORING SYSTEMS** Provider is responsible for the complete and fully functional installation and operation of the Supervisory Control and Data Acquisition ("SCADA") System. Any labor, communications devices, wiring and or other materials shall be included in Provider's cost and scope. The SCADA system shall meet all the requirements outlined in this Agreement.

5.1 **Performance Monitoring & Reporting Service.** Provider shall provide a Performance Monitoring and Reporting Service ("PMRS") contract for the term of the PPA to monitor and collect data

for load side interval meters, Generation Meter, inverters, meteorological stations and all other data points applicable to the Solar Facility operation. Provider shall be responsible for procuring, installing, and commissioning the PMRS equipment, and for entering into a contract with a third party Performance Data Provider ("PDP"). The monitoring service requirements are as follows:

(a) Provider shall provide operator and administrator level training to JPA for using the PMRS software interface as part of commissioning activities.

(b) The PMRS software interface must allow for access via a link from the JPA's website and must allow the users to view and download real-time and historical electricity usage and production data at each Project Site over a variety of timescales. Provider shall coordinate and obtain approval of all data points to be displayed on the public webpage with the JPA prior to implementation.

The PMRS software interface must allow the JPA to programmatically download via Application Program Interface ("API") the real-time and historical electricity usage and production data at each Project Site over a variety of timescales, **including but not limited to, a minimum of one-year of 15-minute interval data.** The API must include the ability to reference most recent inverter, generation meter, weather station and alarm status readings.

5.2 **Equipment / Components** Below is a list of the minimum equipment / components that must be included as part of the PMRS. All equipment shall be installed to equipment manufacturer's recommendations and best practices for solar power systems.

- Load Side Interval Meters. Provider is required to install load side revenue grade interval meters to measure the total (not net) electricity usage, instantaneous demand, power factor, etc. at each main switchboard where the PV Systems are interconnected. The load side revenue grade interval meters shall be installed as part of the PMRS system and send data through the PDP and be displayed on the PMRS software interface.
- Data Logger/Internet Gateway
- Generation Meter Revenue Grade energy meters shall be installed to monitor the generation of the Project at each Site. The Generation Meter shall be located within 10' of the Delivery Point unless an alternative location is agreed to in writing by the JPA. The Generation Meter shall be installed as part of the PMRS system and send data through the PDP and be displayed on the PMRS software interface.
- External Device Communication Provider must arrange for and provide JPA a secure and reliable internet connection adequate to provide a minimum of 15 min data uploads for all of the data points from the PMRS. Provider shall provide a high-speed cellular data service during the entire term of the PPA to record the electric energy generated by the System and all other PMRS data as required by this Exhibit and shall make this information available to the JPA through the PMRS system.
- Inverter Monitoring If inverters are not provided with communications as part of the standard package, then the communications option shall be ordered. Where various communication package options exist those options shall be discussed with the JPA prior to ordering.
- Protective Relays, Medium Voltage Circuit Breakers and Transformers All available data points shall be provided through the PMRS system.
- Meteorological Stations. The Project will require installation of one meteorological station at a location determined by the JPA and to include at least the following:
    - one (1) ISO 9060 first class pyranometer installed at 0° tilt to measure ground horizontal irradiance (GHI)
    - one (1) ISO 9060 first class pyranometer installed at each unique azimuth and tilt of the arrays installed
    - two (2) PV module temperature sensors,
    - one (1) ambient temperature sensor,
    - one (1) wind speed and direction sensor and,
    - one (1) rain gauge.

Sensors shall be mounted away from shadows, reflective surfaces, and sources of artificial irradiation or any other factor that may influence measurement accuracy of the sensors. Irradiation sensors will be installed in the middle of the array.

The PV module temperature sensor data shall be linked to the predicted power calculation formula in the PMRS software interface along with the applicable plane of array irradiance data supplied by the pyranometer for each array.

The meteorological station must be connected to the PMRS so that weather data can be collected and downloaded along with the Solar Facilities production data.

All meteorological station equipment shall be calibrated and tested by the original equipment manufacturer or vendor prior to delivery to the Site and maintained through the Term of the PPA per the manufacturer's requirements. All pyranometers shall be cleaned in the same manner and at the same time as a module washing is performed.

5.3 **Analytics Pages** Each Site PMRS should have the following tabs configured in the monitoring analytics page. They should be labeled uniformly at each site. The tabs should be labeled as follows:

5.3.1 Load Profile

(a) Generation Meter Power (kW)
(b) Demand (kW)
(c) Net Consumption (kW)

5.3.2 Inverter Output kWh per inverter (each inverter shall have a unique name matching the naming convention in the As-Builts)

5.3.3 Predicted kW

(a) Generation Meter Power (kW)
(b) Predicted Power (kW)

5.3.4 Inverter vs GenMeter kW

(a) Each inverter as: Inverter A – Manufacturer kW Capacity Power (kW)
(b) Generation Meter Power (kW)

5.4 **Other Data** Each Site PMRS should have the following minimum additional information available:

5.4.1 *Alarms* Each site should have at least the following custom alarms:

(a) Inverter produces less than 10% of the inverter capacity over the course of an hour between 10am and 3pm. The upper limit of the alarm should be set to twice the inverter capacity.

(b) Generation Meter reports less than 0.1 kW for one hour between 10am and 3pm. The upper limit of the alarm should be set to twice the site capacity.

5.4.2 *Settings* All System information should be filled out completely and correctly on the monitoring platform to match the As-Built drawings and allow for easy identification of equipment and other System information.

6. CONSTRUCTION Provider is required to conduct all construction and construction management work for completion of the Project. Provider shall perform all work in accordance with generally accepted industry practices, all applicable laws, regulations, codes, rules, ordinances, government approvals, and permitting requirements, equipment manufacturer's requirements, and quality control inspection protocols

so that each Solar Facility meets or exceeds (i) all requirements of applicable laws, government approvals and licenses; (ii) equipment manufacturer's installation specifications, and compliance with the terms and conditions of all applicable warranties and guarantees; (iii) complies with all requirements of the Interconnection Agreement; (iv) all established safety protocols for operation and maintenance, and labeling / placarding requirements; (v) all requirements of the commissioning procedures and performance validation herein; (vii) all requirements for any applicable federal, state or other environmental or financial rebates and incentives. All Work must be performed and supervised by skilled workers trained and experienced in the installation of photovoltaic solar systems in accordance with equipment manufacturers' installation requirements. Provider is encouraged to utilize local sub-contractors and source materials and resources locally should they provide requisite qualifications and competitive advantages.

6.1 **Environmental Mitigation Measures** Pursuant to JPA's Mitigated Negative Declaration of January 2019, Project activities including, but not limited to, site preparation, construction, or fuel modification, with potential to disturb suitable bird-nesting habitat shall be prohibited within the breeding/nesting season for native bird species (February 1 through August 31). If Project activities cannot feasibly avoid the breeding bird season, thirty (30) days prior to the disturbance of suitable nesting habitat, Provider shall arrange for weekly bird surveys to detect any protected native birds in the habitat to be removed and any other such habitat within properties adjacent to the project site, as access to adjacent areas allows. A qualified biologist with experience in conducting breeding bird surveys shall conduct the surveys. The surveys shall continue on a weekly basis with the last survey being conducted no more than three (3) days prior to the initiation of clearance/construction work. The field surveys shall determine if active nests of any bird species protected by the state or federal Endangered Species Acts, Migratory Bird Treaty Act, and/or the California Fish and Game Code Sections 3503, 3503.5, or 3511 are present at the limits of disturbance or within 500 feet of the limits of disturbance. If active nests are identified during pre-construction surveys or discovered after construction has started, they will be protected with spatial buffers. Buffer size will be determined on a case-by-case basis by a qualified biologist based on site conditions, the species' life history and disturbance tolerance, the nest's distance to construction activities, and the type of construction ongoing in the vicinity of the nest. Buffers will be clearly delineated (e.g., using rope, flagging, signage); or they may also be defined by natural or man-made features that are deemed sufficient to prohibit access (e.g., tree rows, fences). Buffers will remain in place and will be monitored and maintained regularly during the nesting season or until the biologist determines that the young have fledged or the nest failed or construction has been completed.

6.2 **Site Safety and Security** The Provider shall be solely responsible for compliance with all applicable occupational safety and health standards, rules, regulations and orders established by local agencies, the State of California, and California Division of Occupational Safety and Health Construction Safety Regulations (Cal OSHA), including obtaining permits required by California Code of Regulations, Title 8, Section 341 and 341 (a). In addition, Provider and all subcontractors shall comply with applicable provisions of Federal, State, and municipal safety, health, and sanitation statutes and codes. In the event there is a conflict between the provisions of the Safety and Health Regulations for Construction promulgated by the U.S. Department of Labor in Title 29 CFR Part 1926, Occupational Safety and Health Act (OSHA), or the California Occupational Safety and Health Act regulations in the California Labor Code Section 6300 et seq. (Cal. OSHA), the more stringent provision shall prevail.

Provider will develop a site specific OSHA approved safety plan for each Project Site and submit it to JPA for review and approval prior to the start of construction. The Site Safety and Security Plan shall include an evaluation and appropriate documentation of the safety record for all Subcontractors that will be performing work on the Project, a traffic control plan, and an Injury and Illness Prevention Program plan. The Site Safety and Security Plan shall also include the location of emergency utility shutoffs and an evacuation plan. A safety conference shall be scheduled prior to the start of construction to review the experience modification rating, the respective safety requirements, and to discuss implementation of all

health and safety provisions related to this project. Representatives from the Provider, every subcontractor and the JPA shall be present at the safety conference. No work shall be performed on the Project prior to written confirmation that the JPA has accepted the Site Safety and Security Plan.

Following the commencement of work on the Project, safety meetings will be held once a week with all Provider and subcontractors employees attending. Printed names will be taken of those attending the meeting. No individual will start work at any Project Site without having attended a safety briefing on the dangers and protocols of the Project Site. Records of this training will be kept and provided to JPA for review. No individual will operate a piece of equipment on which they have not had certification training. Certification shall be carried on the operator at all times.

Please note that the JPA has adopted a "Total Safety Culture" and reserves the right to suspend the work wholly or in part, for any time period as the JPA representative deems necessary, due to unresolved safety disputes. Any costs or schedule impacts that result from the JPA suspending work due to unresolved safety disputes shall be the full responsibility of the Provider.

Security of the construction site is the sole responsibility of Provider, including any security monitoring equipment, fencing or other precautions that Provider may deem reasonably necessary. JPA will not be liable for theft or damage of equipment or materials stored at the Project Sites.

6.3 **Access to and Use of Project Sites** JPA shall provide access and area at each Project Site for the performance of the work on the Project, including lay-down area and storage area. JPA will grant Provider access to each Project Site to perform all work associated with the Project and on-going Operation & Maintenance during regular business hours, or such other reasonable hours requested by Provider and approved by the JPA in accordance with this Agreement. Access points to the Sites must be closely coordinated with the JPA and approved in advance before construction begins.

Provider agrees not to bring, keep, or permit to be brought to, or kept at or near any Project Site, any hazardous materials, or materials which are prohibited by the JPA or prohibited by the standard form of JPA's insurance policy. Provider agrees not to commit or suffer to be committed any waste upon the Project Sites.

6.4 **Drawings** Provider shall maintain one complete Engineering Design Package at the job site including one full set of full size plans marked to show any deviations that have been made from the approved plans, including but not limited to buried or concealed construction features or utilities which are revealed during the course of construction. Current as-built record drawings shall be accessible to the JPA at all times during the construction period. They shall be reviewed with the JPA at regular intervals. Upon completion and prior to final inspection of the Project, the Provider shall submit the complete Engineering Design Package to the JPA for review and shall make such revisions or corrections as may be necessary for them to be a true, complete, and accurate record of the Project in the opinion of the JPA. Final Project Site plan drawings shall be provided that clearly demonstrate that all ground disturbance activities would not encroach into any oak tree protection zone defined as five (5) feet from the canopy dripline, and no less than fifteen (15) feet from the tree trunk.

6.5 **Work-Time Constraints** Great care shall be taken to avoid interruptions to business activities and neighboring properties. Construction activities shall take place between typical working hours of 7:30AM to 4:30PM, Monday through Friday, excluding recognized holidays. Inspections may take place between 7:30AM to 5:00PM, Monday through Friday, excluding recognized holidays. If inspections are required outside of these available time slots then special arrangements must be made in advance and are subject to JPA approval to ensure compliance with the JPA's Mitigated Negative Declaration of January 2019. Noise suppression shall be practiced at all times to minimize disturbance to persons living or working

nearby, and to the general public. A maximum of 65dB shall not be exceeded when measured at any property line. Provider shall ensure that all mobile earth-moving and construction equipment has properly operating and maintained mufflers. Provider will be required to provide necessary weekly updates of scheduled activities at each Site to JPA.

A shutdown plan must be provided to the JPA at least two months in advance to allow for electrical shutdowns to be carefully coordinated with the JPA's Construction and Safety Inspector and Site Plant Manager. All electrical shutdowns shall be carefully coordinated with a trial shutdown completed at least two weeks in advance. Notice of all pending shutdowns shall be provided 30 days in advance, followed by two weeks in advance, followed by forty-eight (48) hours in advance. All interruptions in power to a Site shall be subject to JPA approval and must be coordinated to take place during a specific period of time that will have minimal impact to JPA operations. All efforts must be taken to minimize the amount of time required to complete interconnections. Backup power will be provided by generators during shutdowns, at Provider's expense.

Reasonable efforts must be taken to minimize noise during working hours. Due to the presence of a school directly across the street from the project site, all deliveries should avoid disruption to the school operations, particularly during school pick-up and drop-off times. Deliveries shall take place outside high traffic times and must be coordinated with the JPA's Construction and Safety Inspector. Provider shall manage construction activities around and with consideration to the other projects occurring at the same time where applicable.

6.6 **General Requirements**

6.6.1 Wiring / Conduits

(a) Locations of all pull boxes shall be reviewed with JPA prior to start of construction.

(b) No wire splicing shall be allowed unless approved by JPA.

(c) All exposed wire will be secured every three and a half feet (3.5') minimum.

(d) When terminating aluminum conductors all terminations shall be coated with an oxide inhibitor.

(e) Underground cabling shall have electrical warning tape installed approximately 12 inches below finished grade in the backfill.

(f) Provider shall use GPRS and potholing to survey for underground utilities and use best practices when boring or trenching including hand digging near buried lines. Trenching or boring in potentially high-risk areas (gas lines) shall be coordinated with the JPA.

(g) The Contractor shall carefully preserve all bench marks, monuments, survey markers, and stakes and shall be solely responsible for resetting if required.

(h)

(i) Provider shall confirm that PV systems are interconnected to the correct Distribution Utility meter at each Project Site by validating the meter and service account identification numbers (SAID) with the Distribution Utility.

(j) All exposed wiring shall be properly rated for direct sun exposure.

(k) Exposed wiring shall be restrained utilizing wire clips and per NEC and best practices to eliminate strain on PV module junction box connections, wire pinch points and wire kinks. Strain-relief devices shall be rated and labeled for exposure to UV (direct sunlight).

(l) Conduit entry locations shall be made in manufacturer provided/specified locations only.

(m) All ground conductors shall be protected from physical damage as specified in the NEC.

(n) Power and data lines shall be located in a separate conduits with appropriate separation to avoid interference.

(o) All junction boxes, condolets, etc., are to be sealed with a silicone sealing compound and made watertight. Underground junction boxes shall be covered with traffic rated metal plates bolted / welded in place with a permanent marking on the lid stating "Electrical". Aboveground junction boxes must have tamperproof screws and shall not be placed in areas where water ponding is anticipated.

6.6.2 Equipment

(a) Equipment shall be stored and handled in accordance with manufacturer's requirements.

(b) Inverters shall be placed away from all buildings where the operational noise would disturb the occupants.

(c) All high voltage and high amperage equipment must be installed in secure, tamper-proof, and locked enclosures to prevent unauthorized tampering for safety and theft prevention. Locks for all gates and combiner boxes are to be provided by Provider but must be approved by JPA prior to procurement.

(d) Locks for all gates and combiner boxes to be provided by Provider but must be approved by JPA prior to procurement.

(e) Safety labels are required for high voltage and high amperage equipment.

(f) All enclosures will be detailed prior to Final Completion to insure that any scratches, etc. are properly covered with paint as appropriate.

(g) PV Modules shall have their serial numbers recorded as they are installed grouped and listed by string.

6.6.3 Site Work

(a) It is the Provider's sole responsibility to ensure that all Site Work complies with all federal, state and local code requirements and all applicable industry codes and standards, and all other requirements in the Agreement including the requirements in this Agreement.

(b) Temporary security fencing around construction areas shall be provided throughout construction, to be removed at end of construction, and permanent fencing and bollards added if required.

(c) Prior to the start of any work on Site and following the finish of construction, Provider shall take pre-construction videos and photographs of any and all areas that may be impacted as part of the Project construction and provide the pre-construction videos and photographs to the JPA for review and reference.

(d) Provider shall ensure that all existing underground utilities and installations are not impacted by Project construction. In the event Provider damages or makes inoperable any underground or above ground utilities it will be Provider's full responsibility to notify JPA immediately and make whole and fully operational to JPA's standards and to JPA's satisfaction, at Providers sole cost and expense, all damaged utilities.

(e) Provider is responsible for the repair of any damage to any Project Site that is caused by Provider at their sole cost and expense. Provider shall assess the condition of all areas to be used in the construction of the Solar Facilities prior to construction and shall alert the JPA if any such area cannot accommodate wear and tear caused by ordinary construction activities. In such event, Provider shall propose a reasonable remedy or remedies to such conditions for JPA's consideration.

(f) Damage to JPA's facilities and or the Solar Facility shall be reported to JPA within 24 hours with photographs.

(g) All areas within the limits of construction or otherwise impacted by construction of the Project shall be restored to pre-Project Site conditions at the Provider's sole cost and expense including but not limited to: fine grading, rock and concrete spoils removal, vegetation remediation.

(h) Provider will coordinate with JPA when boring or trenching is performed, when laydown areas are determined, when major shipments are planned, or any other activities that might impact JPA's business operations.

(i) Provider shall correctly torque all such equipment or assemblies requiring torque and mark torqued bolts to designate status of having been torqued. JPA or JPA's representative may at any time request a test of marked bolts. Failure of a bolt designated as torqued to show that torque may require all assemblies to be re-torqued in the presence of a third-party inspector – such inspector to be paid for by Provider.

(j) Provider shall maintain a clean and workmanlike construction site. Loose debris and unsafe conditions shall not be tolerated at any time.

(k) Provider is responsible to obtain all necessary Site data, perform all required geotechnical investigations and determine all Site data required for the design and construction of the System at their sole cost. This shall include determination of code requirements for seismic, snow and wind design loads.

(l) Provider shall be responsible for coordination with the JPA selected contractor for the work to be performed in accordance with Attachment J. Provider shall be responsible for ensuring that all of the work to be performed in accordance with Attachment J will meet all of the requirements for the Project and will immediately inform the JPA of any discrepancy. Any work that is not covered in Attachment J that is required to install the Project and meet the requirements of this Agreement will be the Provider's sole responsibility. Any damage done to the work performed by the JPA selected contractor shall be repaired to its original condition by Provider at Provider's sole cost and expense.

(m) Provider shall be responsible for the removal and disposal of all excess soil and construction related debris in accordance with Applicable Law.

(n) Appropriate safety signs are required to caution drivers for speed or path restrictions near equipment pads.

(o) Safety bollards or traffic pylons with reflective strips shall be installed where any part of the Project is adjacent to a road.

(p) Signs and barricades shall be provided and maintained by Provider and shall be in accordance with jurisdictional regulations for accident prevention and in accordance with the Safety Plan.

(q) Provider shall ensure to reasonable extent and availability of installation space that solar structures are built away from the line of sight of neighboring properties.

(r) H-20 rated concrete tops with round CI lids will be supplied for all underground Christy box locations unless the JPA approves an alternative approach.

(s) Provider shall verify all required clearances in the field prior to construction, and is solely responsible therefor.

(t) Driveways in parking lots must stay open during construction. Any parking lot driveway closure must be temporary (i.e. a few hours for heavy material delivery) and shall be coordinated with JPA.

(u) Temporary power for construction shall be arranged and paid for by Provider.

(v) Provider is responsible for providing drinking water and sanitation facilities for all workers.

(w) All cut edges of galvanized strut or other support structure materials shall be cold galvanized unless the JPA approves an alternative.

(x) All enclosures shall have paint touched up to cover all scratches and other wear and tear that may have occurred during construction.

(y) Saw cut concrete shall be replaced joint to joint and match nearby area.

(z) Provider shall backfill all trenches with engineered fill and compact in accordance with JPA specifications.

(aa) All asphalt cuts shall be made in square or rectangular cuts to avoid inconsistent repair work. Provider shall cover asphalt trenches with hot mix asphalt, roll for compaction, and cover the

width of the trench with a slurry seal after the cure period. All repairs shall be made to match existing. Any repainting of striping shall be the responsibility of the Provider.

(bb) Provider shall conduct harmonic testing and install necessary line filters if JPA or the utility detects electromagnetic interference (EMI) following the installation of the Solar Facilities. Detection of EMI includes noticeable power interruptions in previously functional electrical equipment.

(cc) Provider must apply for fire hydrant meter permit and cover all water use expenses for construction water use where applicable.

(dd) JPA will supply a fire hydrant meter providing recycled water for use by Provider and cover all related expenses for construction water use where applicable. The Provider shall be responsible to provide means of pumping, piping, transport, etc. for such water from the JPA supplied fire hydrant meter to the construction area. The JPA will not provide water for O&M purposes, including panel washing.

7. **FINAL PROJECT CLOSEOUT.** Prior to final completion of the Project, Provider will perform the following tasks:

- Complete all unfinished work described on a Punch List approved by JPA in a timely manner.
- Complete final clean-up of each Project Site, which shall include a thorough washing of the PV modules. All module washing shall be completed in accordance with the module manufacturer's recommendations.
- Confirm minimum 30-day continuous operation for the entire system and all sub-systems, and ancillary equipment without downtime following the final commissioning.
- Assemble and provide JPA with all documents outlined below and all other required submittals.
- Provide trainings for JPA personnel on emergency shut-down procedures as well as standard inverter restart procedures.

A complete set of project documentation shall be provided to the JPA at the finish of construction for record keeping purposes. The project documentation shall include, at a minimum, the following documents:

- Copy of Executed Agreement(s) and all amendments
- Copy of the Notice to Proceed to Pre-Construction
- Copy of the Notice to Proceed to Construction
- Copies of all reports / studies completed including but not limited to:
    - Underground Utility Study
    - Title Reports / ALTA surveys
    - Geotechnical Studies
    - Environmental Studies
    - Bore Logs including GPS location coordinates and depth dimensions for all Project underground utilities
    - Glint and Glare Study
    - Arc Flash Study
- Final AHJ approved design drawings in PDF and AutoCAD (1 electronic).
- Copies of all Governmental Approvals required for the Project to be constructed (1 electronic)
- Copies of all Governmental Approvals required for the Project to be operational (1 electronic)
- Letter to the Distribution Utility requesting final inspection in advance of Permission to Operate (1 electronic).
- Completed Commissioning Schedule - Attachment F (1 electronic).
- Permission to Operate Notice from the Distribution Utility (1 electronic)

- All incentive related documents (1 electronic)
- All final executed Distribution Utility Agreement(s) – Interconnection, meter, etc. (1 electronic)
- As-built drawings in PDF and AutoCAD (1 electronic)
- As-built drawings in Mylar (one complete set)
- Equipment data sheets, installation & user manuals, and warranties for all major equipment including but not limited to: modules, inverters, batteries, transformers and racking (1 electronic)
- Final Site Assessment Table in PDF and Microsoft Excel formats (1 electronic)
- Final punchlist showing proof of completion of all items (1 electronic)
- Letter stating Commercial Operation Date achievement and date
- Contact Information for all key Provider personnel including:
    - Provider's name
    - Provider's main office mailing address, phone, fax, and email
    - Employer Identification Number ("EIN")
    - Provider's main contact person and title, mailing address, phone, fax, and email
    - Operations and Maintenance contact person and title, mailing address, phone, fax, and email
- Two (2) sets of keys to all locks, equipment, fence gates and boxes.
- Operations and Maintenance Manual including:
    - Overall system O&M documentation
    - O&M manual location and contact
    - Inverter startup and shutdown procedure for each type of inverter
    - JPA training completion date, including list of personnel trained in inverter shutdown and restart procedure
- Monitoring System Information including:
    - Monitoring specification sheet
    - Meter calibration records with serial numbers for all meters
    - Website access and operation instructions
    - List of public monitoring websites
    - IP Addresses and login Information of Acquisuite or equivalent
    - Network configuration documentation
    - Performance Data Provider contracts
- Site photographs of all items listed below (electronic version only)
    - Arrays
    - Inverters
    - Combiner boxes
    - Disconnects
    - Monitoring equipment
    - Weather station
    - Generation Meter
    - Distribution Utility Meter

8. **OPERATIONS AND MAINTENANCE** Provider shall be responsible for all operations and maintenance of the Solar Facilities. The operations and maintenance of the Solar Facilities shall include at a minimum:

8.1 All preventative maintenance required to maintain all equipment warranties.

8.2 Provider shall provide erosion control, weed abatement, and security for the Site throughout the Term of the Agreement at their sole expense.

8.3 Provider shall maintain one complete Engineering Design Package throughout the Term of the PPA and update with any changes made from the as-built drawings provided at the completion of construction.

8.4 A minimum of two annual module washings shall be required and timing of the bi-annual washing shall be coordinated with the JPA to ensure mutual beneficial production gains.
All pyranometers shall be cleaned at the same time as, and with similar care, as the module washing.

ATTACHMENT A
TO GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS

PRELIMINARY ENGINEERING DESIGN PACKAGE
[TO BE PROVIDED BY PROVIDER PRIOR TO PPA EXECUTION]

ATTACHMENT B
TO GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS

SITE ASSESSMENT TABLE
[TO BE PROVIDED BY PROVIDER PRIOR TO PPA EXECUTION

ATTACHMENT C
TO GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS

PROJECT SCHEDULE [TO BE PROVIDED BY PROVIDER]

Provider will develop, with input from JPA, a Preliminary Project Schedule and a Final Project Schedule using Microsoft® Project or equivalent and submit the Final Project Schedule to JPA within 30 days after the Agreement Effective Date. Provider and JPA will establish a weekly construction meeting at which time the work of the previous week will be reviewed, and a three-week look-ahead schedule will be coordinated. The three-week look-ahead schedule shall be created in MS Excel® and present the list of activities occurring at each Site on a daily basis.

The work on the Project shall be completed on or before the Commercial Operation Date in accordance with the Final Project Schedule set forth below and as may be amended from time to time during the Agreement Term but in no case extending beyond the Commercial Operation Deadline. The Final Project Schedule shall only be modified upon the written approval of JPA. Any modified schedule approved by JPA shall replace the existing Final Project Schedule set forth below.

The Final Project Schedule (Anticipated Key Engineering and Construction Dates) shall include, at a minimum, the following and shall become a part of the Agreement upon JPA's approval:

50%, 90% and 100% drawings due to JPA
JPA review of 50%, 90%, 100% drawings
Permit approval
Procurement
Site preparation
Construction start
Electrical & Mechanical completion
Interconnection sign off
Testing & commissioning
Utility meter and rate switch completion
Permission to Operate
Final completion date

The Final Project Schedule shall not show more than 10% of the total activities as critical, and no activity shall have duration longer than thirty (30) days. The Final Project Schedule shall indicate the beginning and completion dates of all phases of construction and shall use the "critical path method" (CPM) for the planning and scheduling of all work required. The schedule will separately identify those milestones or events that must be completed before other portions of the work can be accomplished. The Final Project Schedule shall incorporate float for inclement weather and resulting muddy site conditions due to rain and shall also include any potential acceleration paths. Scheduled float for non-working rain-related days and resulting muddy site conditions shall be based upon the latest and nearest available data from acceptable data issued from the National Weather Service.

A monthly project schedule update shall be provided to accurately indicate the actual progress of the work against the baseline Final Project Schedule for the prior month, and the remaining planned completion of the work.

The scheduling is necessary for the JPA's adequate monitoring of the progress of the work. The JPA may disapprove such a schedule and require modification to it if, in the opinion of the JPA, adherence to the progress schedule will cause the work not to be completed in accordance with the Agreement. Provider shall adhere to any such modifications required by the JPA. Between the monthly schedule updates, it is the obligation of the Provider to monitor the progress of the work against the current construction schedule activities, and to notify the JPA in writing of all changed activity start dates and finish dates.

Provider will exchange scheduling information with Subcontractors and suppliers. Provider will order work, equipment and materials with sufficient lead time to avoid interruption of the work.

The Provider shall also, if requested by the JPA, provide revised schedules within fifteen (15) days if, at any time, the JPA considers the Commercial Operation Date to be in jeopardy. The revised schedule shall be designed to show how the Provider intends to accomplish the work to meet the original Commercial Operation Date. The form and method employed by the Provider shall be the same as for the original progress schedule. The Provider shall modify any portions of the schedule that become infeasible because of "activities behind schedule" or for any other valid reason. Provider will provide documents and justification for any schedule changes. An activity that cannot be completed by its original Commercial Operation Date shall be deemed to be behind schedule.

IF PROVIDER SUBMITS A REVISED SCHEDULE SHOWING AN EARLIER COMMERCIAL OPERATION DATE FOR THE PROJECT, JPA'S ACCEPTANCE OF THIS REVISED SCHEDULE SHALL NOT ENTITLE PROVIDER TO ANY ADDITIONAL COMPENSATION OR CLAIM DUE TO ANY SUCH REVISED SCHEDULE.

ATTACHMENT D
TO GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS

CONSTRUCTION MEETING MINUTES TEMPLATE

<PROJECT NAME>

PROGRESS MEETING #XX MINUTES
Date: 2014-01-01
Time of Meeting: 0:00
Location: Building XX, Room YY

MEETING ATTENDEES

Company	Name	Present

(PT) attended part-time (Y) attended in person (CC) attended via conference call

Section 1: Contract

No.	Date	Action	POC	Due Date	Status

Section 2: Engineering and Design

Section 3: Project/Construction Schedule Review

Section 4: RFIs and Submittals

Section 5: Pending Change Order (PCO), Change Order (CO), and Pay Application

Section 6: General Discussion / Site Issues

Section 7: IOR and SI Topics

Section 8: Scheduled Testing and Inspection

Section 9: End of Meeting Minutes (note these items will be applied to the appropriate sections in the next meeting's agenda)

ATTACHMENT E
TO GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS

CHANGE FORM TEMPLATES

[TO BE PROVIDED BY PROVIDER PRIOR TO PPA EXECUTION]

ATTACHMENT F
TO GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS

COMMISSIONING SCHEDULE

Overview:

Provider technical personnel, with the assistance of the equipment manufacturer(s) as needed, will perform a complete commissioning of each Solar Facility following at a minimum the Commissioning procedures outlined in this Attachment as well as other standard tests, inspections, safety and quality checks. Provider shall be solely responsible to perform all tests that are required to verify that the Project was constructed in accordance with all applicable laws and industry standards, is expected to achieve the design life target, and will perform as anticipated to the Provider guaranteed Contract Quantity. Where forms have not been provided Provider shall provide the results of any tests in a standard format. All testing and commissioning will be conducted in accordance with the manufacturer's specifications. Provider will notify JPA at least 14 calendar days in advance of any commissioning activities and reserves the right to have a representative present for all commissioning. Additionally, JPA reserves the right to have the testing and commissioning results verified by a representative designated by JPA to evaluate and certify the capabilities of the Solar Facilities **("Commissioning Engineer")**.

These commissioning testing procedures for photovoltaic systems and major components are intended to determine system performance to the specification. The tests are designed to verify that the system, as installed, is safe for personnel as well as equipment, and to establish or verify System operation. The tests shall be used to determine actual post-construction operational, performance, and safety characteristics.

Testing and commissioning procedures must comply with the latest revisions of standards by NETA and NEMA. All testing and commissioning reports must be included in the operating and maintenance manuals.

SOLAR ENERGY FACILITY COMMISSIONING RESULTS

JPA Name _____ Project Site Name_____

Solar Facility Address (City, State, Zip) _____

Solar Facility Size (kW DC-STC) _____

Solar Facility Size (kW AC) _____

Utility and JPA meter number_____

Commissioning report submitted by_____

Provider _____

Time and date of commissioning_____

Weather at time of commissioning_____

Record and document inverter serial number and inverter location_____

_____

This checklist is a guide to establish post construction Solar Facility operation, performance and safety. The local authorities having jurisdiction over the Project or inspector have the final say on what is or is not acceptable. Local codes may modify the requirements of the NEC. This list should be used in conjunction with Article 690 and other applicable articles. If article 690 differs from other articles of the NEC, Article 690 takes precedence.

PV ARRAY – GENERAL

Complete each item on the checklist below, check the box to the left of the item when it is complete

- ☐ Verify that all combiner fuses are removed and that no voltage is present at the output of the combiner box
- ☐ Recheck that fuses are removed and all switches are open
- ☐ Check that non-current carrying metal parts are grounded properly (array frames, metal boxes, etc. are connected to the grounding system)
- ☐ All debris has been removed from roof or ground
- ☐ Take photos of all sub-arrays and all inverters
- ☐ Inspect all roof penetrations and wall penetrations (ensure conduits and structural brackets are properly sealed/waterproofed) (where applicable)
- ☐ Ensure all labels and safety signs required by applicable law and any additional labels and signs specified in the Agreement Documents are in place
- ☐ Check that all home runs are properly identified at the inverter back to the combiner boxes
- ☐ Check that combiner boxes are properly labeled
- ☐ Check source strings in DC combiner box are in the proper order and make sure labeling is clearly visible
- ☐ Verify that all AC and DC disconnect switches are in the open position
- ☐ Check that the solar modules are secured to the mounting system
- ☐ Visually inspect the array for cracked modules
- ☐ Check to see that all wiring is neat and well supported
- ☐ Visually check that the rows of ground mount modules have been installed in straight lines that are parallel to each other.
- ☐ Check that all nuts and bolts have been properly torqued and record results using array naming nomenclature matching the As-Built drawings.

REPETITIVE SOURCE CIRCUIT STRING WIRING

- ☐ Verify that the both the positive and negative string connectors are identified properly with permanent wire marking
- ☐ Repeat this sequence for all source circuit strings
- ☐ VERIFY POLARITY OF EACH SOURCE CIRCUIT STRING in the DC String Combiner Box (place common lead on the negative grounding block and the positive on each string connection—pay particular attention to make sure there is NEVER a negative measurement)

WARNING: IF POLARITY OF ONE SOURCE CIRCUIT STRING IS REVERSED, THIS CAN START A FIRE IN THE FUSE BLOCK RESULTING IN THE DESTRUCTION OF THE COMBINER BOX AND POSSIBLY ADJACENT EQUIPMENT. REVERSE POLARITY ON AN INVERTER CAN ALSO CAUSE DAMAGE THAT IS NOT COVERED UNDER THE

EQUIPMENT WARRANTY

- ☐ Record the I-V curve for each string using an I-V curve tracer. Results should be submitted as an MS Excel file generated by the I-V curve tracer. The MS Excel files must be named and organized such that the location of the fuse (i.e. facility name, inverter name/size, combiner box name, fuse and string number) can be conveniently identified and the nomenclature shall match that of the as-built drawings.
- ☐ Verify open-circuit voltage of each source circuit string is within proper range according to manufacturer's installation manual and number each string and note string position on as-built drawing. (Record the string voltage for each string using the same nomenclature as used in the as-built drawings in the attached Appendix, provide one attachment per combiner)
- ☐ Retighten all terminals in the DC String Combiner Box

WIRING TESTS

- ☐ Check the AC line voltage(s) at the main AC disconnect and record the voltage here:

  _____
- ☐ If installation contains additional AC disconnect switches, repeat the voltage check on each switch working from the main service entrance to the inverter AC disconnect switch, closing each switch after the test is made except for the final switch before the inverter (it is possible that the system only has a single AC switch)
- ☐ Check an electrical connection between the ground and the conductive surface of the PV modules. Perform test with a multi-meter or 100 mA dc source. If the resistance is less than 1 Ω, then the ground is considered good
- ☐ Cable continuity tests shall be performed on all cables in the System and recorded using cable naming nomenclature matching the As-Built drawings. Each cable shall be labeled in the field using the same nomenclature.
- ☐ Insulation resistance tests shall be performed on all cables in the System by qualified personnel using appropriate methods and IR values for the cable being tested (not required for PV string wiring) and recorded using cable naming nomenclature matching the As-Built drawings.

INVERTER STARTUP TESTS

- ☐ Be sure that the inverter is off before proceeding with this section
- ☐ Test the continuity of all DC fuses to be installed in the DC string combiner box, install all string fuses, and close fuse switches in combiner box
- ☐ Check open circuit voltage at DC disconnect(s) switch(s) to ensure it is within proper limits according to the manufacturer's installation manual and record the voltage here:

  _____
- ☐ If installation contains additional DC disconnect switches, repeat the voltage check on each switch working from the PV array to the inverter DC disconnect switch, closing each switch after the test is made except for the final switch before the inverter (it is possible that the system only has a single DC switch)

  _____
- ☐ At this point, consult the inverter manual and follow proper startup procedure (all power to the inverter should be off at this time)
- ☐ Confirm that the inverter is operating and record the DC operating voltage here:

  _____
- ☐ Cross check that the power output shown on the inverter is the same as on the supplied performance meter within a + or – 2% tolerance

Inverter kW _____

ONSITE MONITORING SYSTEM COMMISSIONING – LOAD SITE INTERVAL METERING
(Go to metering enclosure and CT location for this section)

- ☐ Check CT's are orientated in the correct direction and take a picture, the black wire's from the CT's should be facing towards the Utility service panel
- ☐ CT's manufacturer _____
- ☐ CT serial numbers A_____ B_____ C_____
- ☐ Meter manufacturer and serial number (Ex: Shark or ION)
  _____
- ☐ Remove the **meter calibration report** from the monitoring enclosure for delivery to Owner with this report
- ☐ Power Factor (PF)_____ (If the Power Factor is negative then one or more of the CT's are installed backwards)
- ☐ Watts (W)_____ Hz _____ Amps _____
- ☐ Volts L-N A_____ B_____ C_____
- ☐ Volts L-L A_____ B_____C_____
- ☐ If Static IP -- IP Address_____ Subnet _____ Gateway_____
- ☐ Verify that AC Power of Phase A, B and C are positive and within 2% of each other with the PV system disconnected

ONSITE MONITORING SYSTEM COMMISSIONING - GENERATION METER
(Go to metering enclosure and CT location for this section)

- ☐ Check CT's are orientated in the correct direction and take a picture, the black wire's from the CT's should be facing towards the Utility service panel
- ☐ CT's manufacturer _____
- ☐ CT serial numbers A_____ B_____ C_____
- ☐ Meter manufacturer and serial number (Ex: Shark or ION)
  _____
- ☐ Remove the **meter calibration report** from the monitoring enclosure for delivery to Owner with this report
- ☐ Power Factor (PF)_____ (If the Power Factor is negative then one or more of the CT's are installed backwards)
- ☐ Watts (W)_____ Hz _____ Amps _____
- ☐ Volts L-N A_____ B_____ C_____
- ☐ Volts L-L A_____ B_____C_____
- ☐ If Static IP -- IP Address_____ Subnet _____ Gateway_____
- ☐ Verify that AC Power of Phase A, B and C are positive and within 2% of each other

ONLINE SYSTEM COMMISSIONING Check that the following field devices are communicating and the data feedback is accurate:

- ☐ Go to http://www.[_____]
- ☐ Login to the system provider's website
- ☐ Generation Meter - Check kW output of system is accurate
- ☐ Environment - Check that the feedback from the weather station sensors is accurate

☐ Inverter Monitoring
☐ DC Monitoring

SYSTEM TEST

- Digital Irradiance Meter
- Infrared Thermometer
- PV Module(s) Data Sheet(s)

APPENDIX 1
TO ATTACHMENT F

SYSTEM DATA – COMPLETE ONE FORM FOR EVERY DC STRING COMBINER BOX OR INVERTER

Note: Irradiance must at least measure 500 W/m^2 during testing
Combiner Box # _____
Combiner box serial number # _____
Inverter _____
Operating Voltage _____

Recorded											Calculated*	
String No.	Ω +/-	Ω +/G	Ω -/G	Polarity	V_{OC}	I	I_{SC}	T_C	T_A	I_{POA}	V_{OC}	I_{SC}
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												

Table Legend
Ω+/- String Wire Resistance Positive to Negative (ohms)
Ω+/G String Wire Resistance Positive to Ground (ohms)
Ω-/G String Wire Resistance Negative to Ground (ohms)
V_{OC} Open Circuit Voltage (V)
I Operating Current (Amp)
I_{SC} Short Circuit Current (Amp)
T_C Cell Temperature (°C)
T_A Ambient Temperature (°C)
I_{POA} Irradiance in Plane of Array (W/m^2)
*Note: Calculated V_{OC} and I_{SC} values must be within 5% of the recorded values.

ATTACHMENT G
TO GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS

NOTICE TO PROCEED FOR PRE-CONSTRUCTION TEMPLATE

<JPA LETTERHEAD>

Date: <DATE>

To: <PROVIDER CONTACT NAME>
<TITLE>
<COMPANY>
<ADDRESS>
<FAX NUMBER>
<PHONE NUMBER>
<EMAIL>

Subject: POWER PURCHASE AGREEMENT

<CONTACT NAME>,

You are hereby authorized to proceed *to complete the Conditions Precedent* listed in the above referenced Agreement beginning **<DATE>**. This notice to proceed is not for procurement or construction of the Project. Subject to the terms of the Agreement Documents, the date for completion of the project shall be no later than **<DATE>**.

Sincerely,

<JPA NAME>
<TITLE>
<ENTITY>
<ADDRESS>
<FAX NUMBER>
<PHONE NUMBER>
<EMAIL>

CC: <CC NAME>
<TITLE>
<COMPANY>
<ADDRESS>
<FAX NUMBER>
<PHONE NUMBER>
<EMAIL>

<MORE CCs IF DESIRED>

ATTACHMENT H
TO GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS

NOTICE TO PROCEED TO PROCUREMENT & CONSTRUCTION TEMPLATE

<JPA LETTERHEAD>

Date: <DATE>

To: <PROVIDER CONTACT NAME>
<TITLE>
<COMPANY>
<ADDRESS>
<FAX NUMBER>
<PHONE NUMBER>
<EMAIL>
Subject: POWER PURCHASE AGREEMENT

<CONTACT NAME>,

You are hereby authorized to proceed *to procurement and construction* of the above referenced Agreement beginning **<DATE>**. Subject to the terms of the Agreement Documents, the date for completion of the Project shall be no later than **<DATE>**.

Sincerely,

<JPA NAME>
<TITLE>
<ENTITY>
<ADDRESS>
<FAX NUMBER>
<PHONE NUMBER>
<EMAIL>

CC: <CC NAME>
<TITLE>
<COMPANY>
<ADDRESS>
<FAX NUMBER>
<PHONE NUMBER>
<EMAIL>

<MORE CCs IF DESIRED>

ATTACHMENT I
TO GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS

MANUFACTURERS' WARRANTIES

List of manufacturers' warranties on a site-by-site basis:

PV Module Manufacturer Warranty [TO BE PROVIDED BY PROVIDER]

Inverter Manufacturer Warranty [TO BE PROVIDED BY PROVIDER]

Transformer Manufacturer Warranty [TO BE PROVIDED BY PROVIDER]

Other Equipment Manufacturer and Solar Facilities Warranties [TO BE PROVIDED BY PROVIDER]

ATTACHMENT J
TO GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS

SITE PREPARATION REQUIREMENTS

Exhibit H

License Agreement

[ATTACHED BEHIND THIS COVER PAGE]

License Agreement

This License Agreement (this "**Agreement**"), dated as of _____, 2019 (the "**Effective Date**"), is by and between LAS VIRGENES SOLAR 1, LLC, a Delaware limited liability company ("**Licensee**" or "LVS"), and Las Virgenes Municipal Water District ("**Licensor**" or "**District**"). Capitalized terms not otherwise defined herein shall have the definitions attributed to them in that certain Solar Power Purchase Agreement, dated as of _____, 2019 (the "**PPA**"), between LVS and Las Virgenes – Triunfo Joint Powers Authority (the "**JPA**"). District and LVS are sometimes referred to individually as a "Party" and collectively as the "Parties".

WITNESSETH

WHEREAS, District owns the real property as identified in **Exhibit A** attached hereto (the "**Property**") for the benefit of the JPA; and

WHEREAS, District wishes to license to LVS, upon approval from the JPA, a portion of the Property more particularly described in **Exhibit B** (the "**Premises**") for the purpose of constructing, installing, owning, operating, and maintaining a solar photovoltaic system (the "**Solar Facility**") as more particularly described in the PPA, and grant to LVS general access rights over the Property for the purpose of accessing the Premises and transmitting the electricity; and

WHEREAS, LVS desires that District grant a license to the Premises to LVS as set forth herein.

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants and agreements herein contained, and intending to be legally bound hereby, LVS and District hereby agree as follows:

1. License. District hereby grants a license to LVS and LVS hereby accepts the license from District, in the Premises, in accordance with the terms and conditions hereinafter set forth, for the purpose of LVS constructing, installing, owning, operating, and maintaining the Solar Facility (the "***License***"). LVS shall not use the Premises for any other purpose without the express written consent of District, which consent may be withheld in District's sole and absolute discretion.

2. Access Rights. District hereby grants to LVS the right of access on, over, and through the Property as necessary or convenient to gain access to the Premises and the Solar Facility. In the event that a utility provider requires an easement in connection with LVS's use of the Premises, District shall grant such necessary easement to the utility provider, provided that such easement is in a commercially reasonable and recordable form.

3. Benefits. LVS shall pay District one U.S. dollar ($1.00) on the Effective Date as consideration for this Agreement.

4. Solar Facility Construction, Installation, Operation, and Ownership.

(a) District hereby consents to the design, construction, installation, operation, maintenance, repair, and periodic alteration, replacement, and removal of the Solar Facility on the Premises, including, without limitation, solar panels, mounting substrates or supports, wiring and connections, power inverters, service equipment, metering equipment, and utility interconnections.

(b) District acknowledges and agrees that LVS is the exclusive owner and operator of the Solar Facility and that all equipment comprising the Solar Facility shall remain the personal property of LVS and shall not become fixtures, notwithstanding the manner in which the Solar Facility is or may be affixed to any real property of District. District shall have no right, title, or interest in the Solar Facility or

any component thereof, notwithstanding that the Solar Facility may be physically mounted or adhered to the Premises. District consents to the filing by LVS, on behalf of District, of a disclaimer of the Solar Facility as a fixture of the Property in the office where real estate records are customarily filed in the jurisdiction of the Property. Throughout the Term, District covenants that LVS shall enjoy quiet and peaceful use, enjoyment, and possession of the rights granted under this Agreement.

5. Representations and Warranties, Covenants of District.

(a) District represents and warrants that District has lawful title to the Property.

(b) District represents and warrants that District (i) has been duly authorized to enter into this Agreement by all necessary action, and (ii) subject to the approval of the fee owner, if any, will not be in default under any agreement to which it is a party as a result of entering into this Agreement.

(c) District hereby discloses that, in the past, it has applied injections of wastewater sludge into the subsurface at the Property and done so in compliance with all applicable laws. Also, District has spread recycled water at the Property for disposal purposes, also in compliance with all applicable laws.

(d) District represents and warrants that there are no Hazardous Substances present on, in, or under the Property or Premises in violation of any applicable law. For purposes of this Agreement, "***Hazardous Substances***" means and includes, without limitation any substance, chemical, material, or waste: (i) the presence of which causes a nuisance or trespass of any kind under any applicable present or future federal, state or local law, whether under common law, statute, rule, regulation, or otherwise, requirements under permits or other authorizations issued with respect thereto, and other orders, decrees, judgments, directives, or other requirements of any governmental authority relating to or imposing liability or standards of conduct, disclosure, or notification with regard to the protection of human health, the environment, ecological conditions, or hazardous materials ("***Environmental Law***"); (ii) which is regulated by any governmental authority; (iii) is likely to create liability under any Environmental Law because of its toxic, flammable, corrosive, reactive, carcinogenic, mutagenic, infectious, radioactive, or other hazardous property or because of its effect on the environment, natural resources or human health and safety, including but not limited to, flammables and explosives, gasoline, petroleum and petroleum products, asbestos containing materials, polychlorinated biphenyls, lead and lead-based paint, radon, radioactive materials, microbial matter, biological toxins, mycotoxins, mold or mold spores, or any hazardous or toxic material, substance or waste which is defined by those or similar terms or is regulated as such by any governmental authority; or (iv) which is designated, classified, or regulated as being a hazardous or toxic substance, material, pollutant, waste (or a similar such designation) under any federal, state or local law, regulation, or ordinance, including under any Environmental Law.

(e) District represents, warrants, and covenants that it shall not permit any lien, claim, right, or other encumbrance to attach to the Solar Facility and agrees to discharge any lien, claim, encumbrance, or interest that attaches to the Solar Facility (other than liens, claims, encumbrances, or interest placed on the Solar Facility by LVS or LVS's creditors).

6. Term. The term of this Agreement shall commence on the Effective Date and terminate on the date that is the last day of the month that follows the twenty-fifth (25th) anniversary of the Commercial Operation Date, as defined in the PPA (the "***Term***"); provided that any renewal of the PPA pursuant to Section 2 of the PPA shall extend the Term until the expiration of the final Renewal Term, as defined in Section 2 of the PPA. Upon extension of the Agreement pursuant to this Section 6, the Agreement shall terminate upon the earlier of the expiration of the PPA and the date that is thirty-five (35) years after

the Effective Date of this Agreement. After termination of this Agreement, District grants LVS a license to enter the Premises for one hundred twenty (120) days to remove the Solar Facility. Notwithstanding the foregoing, if the PPA has terminated for any reason, this Agreement shall terminate on the date on which the PPA terminates. Under no circumstances shall the Term exceed an aggregate of 35 years.

7. Cooperation. District shall cooperate with LVS's requests to assist LVS in obtaining any necessary agreements, permits, approvals, including any zoning, land use, environmental, building, and other permits required to construct, install, operate, and maintain the Solar Facility and any Licenses and approvals from the utility necessary in order to interconnect the Solar Facility to the electrical system and/or the utility's electric distribution system. District shall obtain a non-disturbance agreement ("***NDA***") in favor of LVS from any third party who now has or may in the future obtain an interest in the Property or Premises, including, without limitation, lenders to District, in a form reasonably acceptable to LVS.

8. Maintenance. LVS shall, at all times at LVS's sole cost and expense, maintain that portion of the Premises where the solar panels are located, in a manner sufficient to operate the Solar Facility. All maintenance and repairs shall be carried out in a manner that minimizes the impact on the Solar Facility.

9. Hazardous Substances. Neither Party shall introduce or use any Hazardous Substances on, in or under the Premises or Property in violation of any applicable law, which shall include, but is not limited to, the introduction of any Hazardous Substances arising from broken solar panels. If a Party becomes aware of any Hazardous Substances on, in, or under the Premises or Property, it shall promptly notify the other Party of the type and location of such Hazardous Substances in writing. Each Party agrees to indemnify, defend, and hold harmless the other Party and its Affiliates and their employees and agents from and against any and all administrative and judicial actions and rulings, claims, causes of action, demands, and liability, including, but not limited to, damages, costs, expenses, assessments, penalties, fines, losses, judgments, and reasonable attorney fees that any Party may suffer or incur due to the existence of any Hazardous Substances on the Property or the migration of any Hazardous Substance to other properties or the release of any Hazardous Substance into the environment ("***Environmental Claims***"), that relate to or arise from such Party's activities on the Property or Premises, except to the extent directly attributable to the negligent acts or omissions or willful misconduct of the other Party. District shall further indemnify, defend, and hold harmless LVS and its Affiliates and their employees and agents from and against any and all Environmental Claims due to the presence of any Hazardous Substances in, on, or under the Premises as of the Effective Date. The indemnifications in this Section 9 specifically include, without limitation, costs incurred in connection with any investigation of site conditions or any cleanup, remedial, removal, or restoration work required by any governmental authority. District shall be responsible for and shall promptly conduct any investigation and remediation as required by any applicable Environmental Law or other law relating to all spills or other releases of any Hazardous Substances to the extent not caused by LVS, that have occurred, or which may occur on the Property. This Section 9 shall survive the termination or expiration of this Agreement.

10. Events of Default, Remedies.

(a) The following events shall be defaults with respect to District (each, a "**District Event of Default**"):

(i) District breaches any material term of this Agreement if (A) such breach can be cured within thirty (30) days after LVS's written notice of such breach and District fails to so cure, or (B) District otherwise fails to commence within such thirty (30) day period and diligently pursue and complete within ninety (90) days said cure, if a longer cure period is needed; and

(ii) District fails to pay LVS any undisputed amount due LVS under this Agreement within thirty (30) days from receipt of written notice from LVS of such past due amount; and

(iii) A condemning authority takes all, or a portion, of the Premises which in LVS's opinion is sufficient to render the Premises unsuitable for LVS's use.

If a District Event of Default has occurred and is continuing, in addition to other remedies that may be expressly provided herein, LVS may terminate this Agreement and pursue any and all remedies provided to LVS under the PPA.

(b) The following events shall be defaults with respect to LVS (each, a "**LVS Event of Default**"):

(i) LVS breaches any material term of this Agreement if (A) such breach can be cured within thirty (30) days after District's written notice of such breach and LVS fails to so cure, or (B) LVS otherwise fails to commence within such thirty (30) day period and diligently pursue and complete within ninety (90) days said cure, if a longer cure period is needed; and

(ii) LVS fails to pay District any undisputed amount due District under this Agreement within thirty (30) days from receipt of written notice from District of such past due amount.

If a LVS Event of Default has occurred and is continuing, in addition to other remedies that may be expressly provided herein, District may terminate this Agreement.

11. Assignment. Neither Party shall have the right to assign any of its rights, duties, or obligations under this Agreement without the prior written consent of the other Party, which consent may not be unreasonably withheld, conditioned or delayed; provided, however, that LVS may in its sole discretion and without the consent of District assign any of its rights, duties, or obligations under this Agreement to (i) one or more of its Affiliates, (ii) to a Secured Party, (iii) collaterally assign or pledge its interest hereunder in connection with any financing of the Solar Facility, or (iv) any person succeeding to all or substantially all of the assets of LVS, (any of the foregoing being a "**Permitted Transfer**"). An assignment by either Party in accordance with this Section 11 shall, provided that assignee assumes the assignor's obligations under this Agreement, relieve the assignor of its obligations hereunder, except with respect to undisputed payments due by the assignor as of the effective date of the assignment, which obligations shall be performed by assignor or assignee as a condition precedent to such assignment. This Agreement shall be binding on and inure to the benefit of the successors and permitted assigns.

12. Incorporation of PPA Terms. District acknowledges the terms of the PPA Sections 7 (Ownership of Solar Facility, Output, Green Attributes, and Environmental Financial Incentives), 13(B) (Insolation), 14(E) (Limitation on Liability), 16 (Taxes; Liens), 17 (Liability and Indemnity; Insurance), 19(B) (Collateral Assignment by Provider for Financing Purposes), and 20 (Confidentiality; Publicity) are hereby incorporated by reference and are made a part hereof as if set forth herein at length, District being substituted for JPA under the PPA and LVS being substituted for "Provider" under the PPA and with respect to Section 19(B), this Agreement being substituted for "this Agreement".

13. Amendments. This Agreement may be amended only in writing signed by LVS and District or their respective successors in interest or permitted assigns.

14. Notices. All notices and communications concerning this Agreement shall be in writing and shall be delivered as provided in the PPA Section 22(B), except that notices to the District under this Agreement shall be provided to the following address provided below:

Las Virgenes Municipal Water District
Attention: General Manager of the Administering Agent of the JPA
4232 Las Virgenes Road
Calabasas, CA 91302
Phone: 818 251-2100
Facsimile: 818 251-2159
Email: dpedersen@lvmwd.com

15. Waiver. The waiver by either Party of any breach of any term, condition, or provision herein contained shall not be deemed to be a waiver of such term, condition, or provision, or any subsequent breach of the same, or any other term, condition, or provision contained herein.

16. Headings. The headings in this Agreement are solely for convenience and ease of reference and shall have no effect in interpreting the meaning of any provision of this Agreement.

17. Choice of Law. This Agreement shall be governed by and construed in accordance with the domestic laws of the State of California without reference to any choice of law principles.

18. Binding Effect. This Agreement and its rights, privileges, duties, and obligations shall inure to the benefit of and be binding upon each of the Parties hereto, together with their respective successors and permitted assigns.

19. Counterparts. This Agreement may be executed in counterparts, which shall together constitute one and the same agreement. Facsimile or .pdf signatures shall have the same effect as original signatures and each Party consents to the admission in evidence of a facsimile or photocopy of this Agreement in any court or arbitration proceedings between the Parties.

20. Further Assurances. Upon the receipt of a written request from the other Party, each Party shall execute such additional documents, instruments and assurances and take such additional actions as are reasonably necessary to carry out the terms and intent hereof. Neither Party shall unreasonably withhold, condition or delay its compliance with any reasonable request made pursuant to this Agreement.

21. Waiver of Jury Trial. TO THE EXTENT PERMITTED BY LAW, EACH PARTY HEREBY IRREVOCABLY WAIVES ITS RESPECTIVE RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION IN ANY COURT IN ANY JURISDICTION BASED UPON OR ARISING OUT OF OR RELATING TO THIS AGREEMENT.

22. Compliance With Laws. LVS shall not use the Premises or any part thereof or suffer or permit LVS's agents or contractors to do anything in or about the Premises in conflict with any applicable law, statute, zoning restriction, ordinance, or governmental law, code, rule, or regulation affecting (a) the condition, use, or occupancy of the Premises or (b) the construction, installation, ownership, operation, or maintenance of the Solar Facility. LVS shall not commit any public or private nuisance or any other act or practice which would materially disturb the quiet enjoyment of any occupant of nearby properties.

23. Conflicts. To the extent any conflicts exist between this Agreement and the PPA, the terms of the PPA shall control.

24. Recording. District hereby consents to the recording of a Memorandum of License, at LVS's sole cost, in substantially the form of **Exhibit C** attached hereto.

[signature page following]

IN WITNESS WHEREOF intending to be legally bound hereby, the Parties have executed this Agreement as of the Effective Date.

District:

LAS VIRGENES MUNICIPAL WATER DISTRICT, a Municipal Water District of the State of California

By:_____
Name:
Title:

LVS:

LAS VIRGENES SOLAR 1, LLC

By: 1115 Solar Development, LLC,
its sole member and manager

By:_____
Name:
Title:

EXHIBIT A

PROPERTY LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED CALABASAS IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL A: (APN: 4455-025-900 portion)

THOSE PORTIONS OF THE LAND DESCRIBED AS PARCELS ONE, TWO "A" AND TWO "B" IN FINAL ORDER OF CONDEMNATION, SUPERIOR COURT CASE NO. C 296564, A CERTIFIED COPY OF WHICH WAS RECORDED APRIL 22, 1985 AS INSTRUMENT NO. 85-450302 OF OFFICIAL RECORDS, LYING WITHIN THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER AND THE NORTH HALF OF THE NORTHEAST QUARTER OF SECTION 31, TOWNSHIP 1 NORTH, RANGE 17 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF CALABASAS, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

PARCEL B: (APN: 2069-011-904)

THAT PORTION OF THE LAND DESCRIBED AS PARCEL TWO "A" IN FINAL ORDER OF CONDEMNATION, SUPERIOR COURT CASE NO. C 296564, A CERTIFIED COPY OF WHICH WAS RECORDED APRIL 22, 1985 AS INSTRUMENT NO. 85-450302 OF OFFICIAL RECORDS, LYING WITHIN SECTION 30, TOWNSHIP 1 NORTH, RANGE 17 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF CALABASAS, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

PARCEL C: (APN: 2069-011-907)

THAT PORTION OF THE SOUTHWEST QUARTER OF SOUTHEAST QUARTER AND SOUTHEAST QUARTER OF SOUTHWEST QUARTER OF SECTION 30, TOWNSHIP 1 NORTH, RANGE 17 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF CALABASAS, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE SOUTHERLY LINE OF SAID SECTION 30, WITH CENTERLINE "C" OF LAS VIRGENES ROAD AS SHOWN ON TRACT MAP NO. 44436, FILED IN BOOK 1148 PAGES 59 THROUGH 61 OF MAPS IN THE OFFICE OF THE REGISTRAR-RECORDER OF LOS ANGELES COUNTY, STATE OF CALIFORNIA; THENCE ALONG SAID CENTERLINE NORTH 10 DEGREES 34 MINUTES 30 SECONDS EAST 315.23 FEET TO THE TRUE POINT OF BEGINNING; THENCE CONTINUING NORTH 10 DEGREES 34 MINUTES 30 SECONDS EAST 603.99 FEET; THENCE LEAVING SAID CENTERLINE SOUTH 79 DEGREES 25 MINUTES 30 SECONDS EAST 300.00 FEET; THENCE SOUTH 10 DEGREES 34 MINUTES 30 SECONDS WEST 561.28 FEET TO THE NORTHERLY LINE OF THE LAND DESCRIBED IN THE FINAL ORDER OF CONDEMNATION RECORDED AS INSTRUMENT NO. 85-450302 ON APRIL 22, 1985 IN FAVOR OF LAS VIRGENES MUNICIPAL WATER DISTRICT; THENCE NORTH 88 DEGREES 24 MINUTES 54 SECONDS WEST ALONG SAID NORTHERLY LINE 273.36 FEET; THENCE NORTH 79 DEGREES 25 MINUTES 30 SECONDS WEST 30.00 FEET TO THE TRUE POINT OF BEGINNING.

EXHIBIT B

PREMISES LEGAL DESCRIPTION

EXHIBIT C

FORM OF MEMORANDUM OF LICENSE

[See attached]

Recording Requested by and after recording return to:

Las Virgenes Solar 1, LLC
c/o Borrego Solar Systems, Inc.
1814 Franklin Street, Suite 700
Oakland, CA 96412
Attn: Legal Department

No transfer tax due. Term of License is less than 35 years.

MEMORANDUM OF LICENSE AGREEMENT

THIS MEMORANDUM OF LICENSE AGREEMENT (the "***Memorandum***"), is made as of _____, 2019, by and between Las Virgenes Municipal Water District, with a principal place of business located at _____, California ("***District***") and Las Virgenes Solar 1, LLC, a Delaware limited liability company with its principal place of business located at 1814 Franklin Street, Suite 700, Oakland, California 94612 ("***LVS***").

RECITALS

A. District is the owner of the real property located in Los Angeles County, California, more particularly described in **Exhibit A** attached hereto (the "***Property***").

B. District and LVS are parties to that certain License Agreement (the "***License***") dated as of _____, 2019 (the "***Effective Date***"). Pursuant to the License, District has licensed a portion of the Property (the "***Premises***") to LVS as more particularly described in **Exhibit B** attached hereto.

AGREEMENT

1. District licenses to LVS and LVS licenses from District, for the Term (as defined below), the Premises in accordance with the terms and provisions of the License.

2. District grants to LVS for the Term, the right of access on, over, and through the Property as necessary and convenient to gain access to the Premises and the Solar Facility (as defined in the License) in accordance with the terms and provisions of the License.

3. The term of the License (the "***Term***") commenced on the Effective Date and terminates on the date that is the last day of the month that follows the twenty-fifth anniversary of the Commercial Operation Date, or upon termination of the parties' Solar Power Purchase Agreement as set forth in section 6 of the License. The Term can be extended for up to two (2) successive terms of five (5) years each, but in no event shall the Term exceed thirty-five (35) years.

4. All of the terms, covenants, and conditions of the License are incorporated herein and made a part hereof. The purpose of this Memorandum is to give notice of the existence of the rights created by the License.

5. As set forth more fully in the License, (a) District shall not interfere with the insolation of solar energy over the Solar Facility, and (b) the Solar Facility shall remain the personal property of LVS and shall not attach to, or be deemed a part of, or fixture to, the Property.

6. This Memorandum shall be governed by the laws of the State of California.

7. The parties agree that this Memorandum may be executed in multiple counterparts which, when signed by all parties, shall constitute a binding agreement.

[remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties have duly executed this Memorandum as of the date first above written.

District:

LAS VIRGENES MUNICIPAL WATER DISTRICT, a Municipal Water District of the State of California

By:_____
Name:
Title:

LVS:

LAS VIRGENES SOLAR 1, LLC

By: 1115 Solar Development, LLC,
its sole member and manager

By:_____
Name:
Title:

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of _____
County of _____
On _____ ___, ____ before me _____, Notary Public personally appeared _____
_____, who proved to me on the basis of satisfactory evidence to be the person(s), whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.
I certify under PENALTY OF PERJURY under the laws of the State of _____that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.

_____
Notary Public

(seal)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of _____
County of _____
On _____ ___, ____ before me _____, Notary Public personally appeared _____
_____, who proved to me on the basis of satisfactory evidence to be the person(s), whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.
I certify under PENALTY OF PERJURY under the laws of the State of _____that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.

_____
Notary Public

(seal)

EXHIBIT A

PROPERTY LEGAL DESCRIPTION

EXHIBIT B

PREMISES LEGAL DESCRIPTION

Exhibit I

Cost Reimbursement Agreement

[ATTACHED BEHIND THIS COVER PAGE]

COST REIMBURSEMENT AGREEMENT
BETWEEN JPA AND PROVIDER

The Cost Reimbursement Agreement ("**Agreement**") is entered into as of March __, 2019 ("**Effective Date**"), by and between Las Virgenes-Triunfo Joint Powers Authority, a California public water JPA ("**JPA**") and Las Virgenes Solar 1, LLC, a Delaware limited liability company ("**Provider**"). JPA and Provider are each referred to individually as a "**Party**" and together as the "**Parties.**"

RECITALS

A. The JPA issued a Request for Proposals for Power Purchase Agreement for Solar Photovoltaic Systems dated September 12, 2018 (the "**RFP**").

B. The RFP requires that the successful bidder reimburse the JPA for certain costs incurred, including: (1) the costs of consultant services ("**Development Costs**"); (2) the JPA's inspection cos ts ("**Inspection Costs**"); (3) the JPA's CEQA consultant costs ("**CEQA Consultant Costs**"); (4) future landscaping costs ("**Landscaping Costs**"); (5) SCE Interconnection Facilities Costs & Distribution Upgrade Costs ("**SCE Interconnection Costs**"); and, (6) SCE 20-Year O&M Charges ("**SCE O&M Charges**").

C. After JPA's receipt of all proposals in response to the RFP, Provider was determined to be the successful respondent in connection with the RFP.

D. This Agreement sets forth the terms and provisions under which Provider shall reimburse the JPA for its Development Costs, Inspection Costs, CEQA Consultant Costs, Landscaping Costs, SCE Interconnection and Distribution Upgrade Costs, and SCE O&M Charges (collectively referred to herein as the "**Incurred Costs**").

NOW, THEREFORE, in consideration of the covenants hereinafter contained and the foregoing recitals, which constitute a part of this Agreement, the Parties agree as follows:

AGREEMENT

1. Scope. The Parties intend to negotiate and enter into a solar power purchase agreement ("**PPA**") for the project specified in Exhibit A, which is attached hereto and made part of this Agreement (the "**Project**"). Provider shall reimburse and pay JPA the Incurred Costs in accordance with the terms and provisions of this Agreement.

2. Incurred Costs. The Incurred Costs are described and calculated as follows:

    a. Development Costs. The Development Costs are the amount payable by JPA to its third party energy advisor ("**Energy Advisor**") in consideration for consultant services provided by the Engineers and Energy Advisor to the JPA, including, but not limited to: analyzing and designing aspects of the Project, preparing the RFP and reviewing responses, facilitating the negotiation of the PPA, and overseeing the performance and completion of the Project. Provider shall reimburse the JPA for the Development Costs actually incurred by the JPA in accordance with Section 3 herein. In no event will Provider be responsible

for payment of any Development Costs in excess of $276,611 (the "**Maximum Development Costs**").

b. Inspection Costs. The Inspection Costs consist of the JPA's actual costs incurred in hiring an Inspector of Record ("**IOR**") to oversee the Project. Provider shall reimburse the JPA for the Inspection Costs only to the extent the Inspection Services are performed, and only with respect to the Project that is built pursuant to the PPA. In no case will Provider be responsible for reimbursing the JPA for more than $5,000 in Inspection Costs (the "**Maximum Inspection Costs**"). The JPA shall be responsible for any Inspection Costs in excess of the Maximum Inspection Costs.

c. CEQA Consultant Costs. The CEQA Consultant Costs are the amount payable by JPA to its third party CEQA Consultants ("**Consultants**") regarding services provided by the Consultants to the JPA, including, but not limited to: analyzing and overseeing the CEQA study of this Project. The CEQA Consultant Costs payable by Provider to the JPA shall be equal to $45,000. In no case will Provider be responsible for reimbursing the JPA for more than $45,000 in CEQA Consultant Costs (the "**Maximum CEQA Consultants Costs**"). The JPA shall be responsible for any CEQA Consultant Costs in excess of the Maximum CEQA Consultant Costs.

d. Landscaping Costs. The Landscaping Costs are the amount payable by JPA to a third-party landscaping company ("**Landscapers**") regarding services provided by the Landscapers to the JPA, including, landscaping associated with CEQA mitigation and screening requirements of the JPA. The Landscaping Costs payable by Provider to the JPA shall be equal to $100,000. In no case will Provider be responsible for reimbursing the JPA for more than $100,000 in Landscaping Costs (the "**Maximum Landscaping Costs**"). The JPA shall be responsible for any Landscaping Costs in excess of the Maximum Landscaping Costs.

e. SCE Interconnection Facilities Costs and Distribution Upgrade Costs. The SCE Interconnection Costs are the amount payable by JPA to Southern California Edison ("**SCE**") regarding the Interconnection and Distribution Upgrade costs identified in the Cost Envelope Report. The SCE Interconnection Costs are payable by Provider to the JPA and shall be equal to $251,494.28. In no case will Provider be responsible for reimbursing JPA for more than $251,494.28 in SCE Interconnection Costs (the "**Maximum SCE Interconnection Costs**"). The Parties acknowledge that any further reimbursements from SCE or additional payments to be made to SCE shall be received or paid, as applicable, by Borrego Solar Systems, Inc.

f. SCE 20-Year O&M Charges. The SCE 20-Year O&M Charges are the amount payable by JPA to Southern California Edison ("**SCE**") as a one-time lump sum payment for O&M costs associated with the Interconnection and Distribution Upgrade requirements of this project. The SCE 20-Year O&M Charges are payable by Provider to the JPA and shall be equal to $147,062. In no case will Provider be responsible for reimbursing JPA for more than $147,062 in SCE O&M Charges (the "**Maximum SCE O&M Charges**").

3. Payment Schedule. Provider shall pay JPA as follows:
    a. 50% of the Development Costs within 15 days of the receipt of an invoice from JPA upon Provider's achievement of the earlier of (i) Provider's completion of the Construction Conditions Precedent as defined under the PPA or (ii) the Construction Start Deadline as defined under the PPA (the "**Conditions Precedent Milestone**"); and

    b. 40% of the Development Costs within 15 days of the receipt of an invoice from JPA following the date on which the JPA issues Provider a Notice to Proceed (as defined in the PPA) (the "**NTP Milestone**"); and

    c. 10% of the Development Costs within 15 days of the receipt of an invoice from JPA following the Commercial Operation Date of the final Project to be constructed (the "**COD Milestone**").

    d. 100% of the Inspection Costs not previously reimbursed under this Agreement within 30 days of the date on which the JPA presents Provider with reasonably detailed invoices from the JPA's Inspector, provided that in no case will Provider be required to pay any Inspection Costs in excess of the Maximum Inspection Costs.

    e. 100% of the CEQA Consultant Costs not previously reimbursed under this Agreement within 30 days of the later of (i) the date on which the JPA presents Provider with reasonably detailed invoices from the JPA's CEQA Consultant and (ii) the date that is 30 days after the Effective Date, provided that in no case will Provider be required to pay any CEQA Consultant Costs in excess of the Maximum CEQA Consultant Costs.

    f. 100% of the Landscaping Costs not previously reimbursed under this Agreement within 30 days of the later of (i) the date on which the JPA presents Provider with reasonably detailed invoices from the JPA's Landscapers and (ii) the date that is 30 days after the Effective Date, provided that in no case will Provider be required to pay any Landscaping Costs in excess of the Maximum Landscaping Costs.

    g. 100% of the SCE Interconnection Facilities Costs and Distribution Upgrade Costs not previously reimbursed under this Agreement within 30 days of the later of (i) the date on which the JPA presents Provider with reasonably detailed evidence from the JPA's payments and (ii) the date that is 30 days after the Effective Date, provided that in no case will Provider be required to pay any SCE Interconnection Costs in excess of the Maximum SCE Interconnection Costs.

    h. 100% of the SCE 20-Year O&M Charges not previously reimbursed under this Agreement within 30 days of the later of (i) the date on which the JPA presents Provider with reasonably detailed evidence from the JPA's payments and (ii) the date that is 30 days after the Effective Date, provided that in no case will Provider be required to pay any SCE O&M Charges in excess of the Maximum SCE O&M Charges.

4. Miscellaneous.

    a. Term; Termination. This Agreement shall be effective as of the Effective Date and shall remain in effect until each Party has fulfilled all of its obligations to the other hereunder.

Notwithstanding the foregoing, if Provider exercises its right under Section 10(A) of the PPA to terminate the PPA prior to the expiration thereof, then effective as of such termination date, this Agreement shall also terminate and Provider shall not owe any remaining amounts hereunder.

b. Limitation of Liability. Neither Party, or its directors, officers, shareholders, Governing Board or members thereof, agents, employees, subcontractors or suppliers shall be liable for indirect, special, exemplary, or consequential damages of any nature arising out of any act or omission hereunder. A Party's aggregate liability arising out of or in connection with this Agreement shall be limited to an amount equal to the sum of the Maximum Development Costs, Maximum Inspection Costs, Maximum CEQA Consultant Costs, Maximum Landscaping Costs, Maximum SCE Interconnection Costs, and Maximum SCE O&M Charges.

c. Dispute Resolution. Any dispute(s) between the Parties arising from or connected to this Agreement shall be handled in accordance with Section 15 of the applicable PPA.

d. Governing Law; Choice of Forum. This Agreement shall be governed by the laws of the State of California. Any action or proceeding seeking any relief under or with respect to this Agreement shall be brought solely in the Superior Court of the State of California for the County of Fresno, subject to transfer of venue under applicable State law.

e. No Partnership. This Agreement shall not be construed or represented as creating any partnership, trust, joint venture, fiduciary or any similar relationship between the Parties. No Party is authorized to act on behalf of the other Party, and neither Party shall be considered or represented as the agent of the other.

f. Full Agreement; Modification. This Agreement, together with any Exhibits, completely and exclusively states the agreement of the Parties regardi ng its subject matter and supersedes all prior proposals, agreements, or other communications between the Parties, oral or written, regarding its subject matter. This Agreement may be modified only by a writing signed by both Parties.

g. Execution in Counterparts. This Agreement may be executed in counterparts such that the signatures may appear on separate signature pages. A copy, or an original, with all signatures appended together, shall be deemed a fully executed Agreement.

h. Severability. If any provision of this Agreement shall be held invalid or unenforceable by a court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof.

i. Binding Effect; Assignment. Provider, by execution of this Agreement, acknowledges that Provider has read this Agreement, including any all Exhibits and attachments thereto, and understands them and agrees to be bound by their terms and conditions. Provider acknowledges and understands that Provider shall not assign this Agreement, in whole or in part, without prior written consent of the JPA. Assignment of this Agreement, or any

rights, duties or obligations thereunder, without the express written consent of the JPA shall be void.

j. Notices. All notices under this Agreement shall be in accordance with the provisions regarding notices set forth in Section 22(B) of the PPA, which Section is hereby incorporated by reference.

Each person executing this Agreement on behalf of a Party represents that he/she is authorized to execute on behalf of and to bind the Party to this Agreement.

JPA:	**Provider:**
LAS VIRGENES-TRIUNFO JOINT POWERS AUTHORITY	**LAS VIRGENES SOLAR 1, LLC** **By: 1115 Solar Development, LLC, its sole member and manager**
By:_____ Name: _____ Title: _____	By:_____ Name: _____ Title: _____

Exhibit A

A solar photovoltaic system to be located at 3810 Las Virgenes Rd., Calabasas, CA 91302

February 12, 2019

Mr. John Zhao, P.E.
Principal Engineer
Las Virgenes Municipal Water District
4232 Las Virgenes Road
Calabasas, CA 91302

Re: Proposed amendment to Consultant Services Agreement to add Owner's Representative project management services for Las Virgenes – Triunfo Joint Powers Authority Phase 2 Solar Energy Project

Dear John,

In support of the implementation of Las Virgenes – Triunfo Joint Powers Authority Phase 2 Solar Energy Project, TerraVerde offers the following proposal for professional consulting services associated with the JPA's proposed 4MW RES-BCT solar project. This proposal includes a scope of Owner's Rep project management services requested by the District (as an amendment to the existing Consultant Agreement) for all remaining phases of the project, starting at the execution of the PPA contract (April 2019) and ending at post-COD project close-out (March 2020); and consisting of the following tasks:

Project Kickoff and Communications:

1. Facilitate and lead project kick-off meeting with PPA Provider's project team and LVMWD Staff to review/discuss: roles & responsibilities, PPA contract terms, Lease Agreement, project schedule and near-term project milestones, civil engineering/site preparation scope & schedule, PPA Provider's mobilization & work plans, District's site operations, District's requirements for site access, security, and safety, status of SCE GIA milestones, communication & correspondence protocols, conflict & issue resolution protocols, plan for bi-weekly project status meetings/calls, project schedule update process & format.
2. Oversee bi-weekly (every 2 weeks), project progress status meetings/calls and distribution of meeting agendas and meeting minutes to all applicable contacts.
3. Oversee project schedule (3-week look ahead) update process and distribution of updated schedules to applicable contacts through the entire design, construction and commissioning process.

Pre-design Activities:

4. Oversee PPA Provider's site due diligence and pre-design activities and respond to PPA Provider's RFIs and questions as needed.
5. Assist LVMWD staff in reviewing PPA Provider's site due diligence findings and provide guidance in responding to documented issues (any previously unknown conditions) that may impact design and/or construction.
6. Oversee PPA Provider's ITC eligibility assessment and review with LVMWD staff.

7. Oversee PPA rate changes due to allowable cost/rate increases (or decreases) per the terms of the PPA and review with LVMWD staff (provide updated savings proformas as required).

SCE Interconnection Agreements, and SCE design/build scope:

8. Oversee achievement of all GIA milestones, including payment schedules, customer information delivery, and assignment & coordination of PPA Provider.
9. Oversee design review for SCE interconnection facilities and distribution facilities upgrades with PPA Provider and LVMWD Staff. Facilitate bi-weekly meetings/calls with SCE's Project Manager and Interconnection Facilities design team during the design and construction phases.
10. Oversee coordination of SCE's field work scope and PPA Provider's interconnection scope to ensure accurate communication, prevention of scope gaps, schedule compliance, and outage notification planning.
11. Oversee Utility signoff and issuance of Permit to Operate (PTO).
12. Assist LVMWD staff with proper rate tariff implementation.
13. Oversee SCE project cost accounting recap report and disposition of any applicable refunds.

Design Review & Approval:

14. Oversee PPA Provider's compliance to engineering & design requirements (including, but not limited to Section 3 of the Technical Specifications).
15. Assist LVMWD staff with the design review process for Preliminary, 50%, 90% and 100% design reviews and manage communication of all required changes/updates with PPA Provider.
16. Oversee PPA Provider's submittals during the design process and assist LVMWD staff with review/approval.
17. Oversee PPA Provider's compliance to equipment and performance monitoring standards & specifications (including, but not limited to Section 4 & 5 of the Technical Specifications).
18. Oversee PPA Provider's progress and completion of all PPA Conditions Precedents.

Project Management, Construction Phases:

19. Facilitate and attend on-site construction kickoff meeting and weekly construction status meetings/calls to ensure PPA Provider's schedule compliance (and weekly updates to the 3week look-ahead schedule).
20. Oversee PPA Provider's compliance to construction standards & requirements (including, but not limited to Section 6 of the Technical Specifications).
21. Oversee responses to PPA Providers RFIs and questions during construction and commissioning phases.
22. Assist LVMWD staff with review/comment/approval of all submittals from PPA Provider during the procurement and construction process.
23. Assist LVMWD staff with review/comment/approval of any requested change orders from PPA Provider.
24. Assist PPA Provider with coordination of LVMWD's *electrical inspections as needed.
25. Oversee installation and start-up of Data Acquisition Systems, weather stations, monitoring systems, and telemetry systems per the Technical Specifications.
26. Oversee testing, start-up and commissioning for each project, (including, but not limited to compliance to Attachment F of the Technical Specifications).

27. Confirm proper operation of PV system using logged performance data and provide performance report to the District. Oversee corrective actions/adjustments as needed to the system.

PPA Provider COD and Project Closeout:

28. Oversee PPA Provider COD process and review all documentation with LVMWD staff.
29. Confirm monitoring system configuration, operation, data transfer, and District's connection to the system.
30. Oversee completion of PPA Provider's Punchlist items per PPA contract terms.
31. Oversee PPA Provider's compliance to project closeout process and delivery of all as-built documentation and related information described in the Technical Specifications (Section 7) to the District.
32. Confirm monitoring system operation and oversee handoff to O&M/AMS Provider(s).
33. Oversee SCE's compliance to the RES-BCT Indifference Payment Settlement Agreement.

Project Economics Updates:

34. Provide updated project financials and net savings proformas as needed based on changes to project scope, PPA rates, and/or SCE rate schedule changes. Also provide end of project savings proformas based on as-built conditions for each project.
35. Oversee and ensure PPA Provider's compliance to the Reimbursement Agreement terms.
36. Assist LVMWD staff with preparation of project status presentations to Committees and the JPA Board as needed.

*: LVMWD will hire a professional electrical inspector to inspect all medium voltage (12kV) and 480V connections and electrical equipment installations for compliance to all applicable codes and standards. TerraVerde will assist with coordination of PPA Provider and Electrical Inspector for the inspections, and will include the Electrical Inspector's scope, schedule, and deliverables in the overall management of each project.
Note: An estimate of the cost of electrical inspections is included in the PPA Provider's Cost Reimbursement Agreement.

TerraVerde's level-of-effort estimate for the above consulting services is $92,920. Our not-to-exceed (NTE) price, including estimated expenses of $8,363 is: **$101,283.**

The projected schedule: April 1, 2019 to March 1, 2020. Note: there may be some overlap in the timing of certain tasks in this scope of services and the PPA negotiation phase scope of services currently in progress.

Deliverables and Billing Milestones

Description of Milestone/Deliverable	**% of Proposal**
Completion of project kickoff meeting and distribution of meeting minutes	5%
Completion of PPA Provider's pre-design site due diligence and delivery of results to District	8%
Completion of 50% design review by TerraVerde and the District	12%
Completion of PPA Provider's Conditions Precedents and issuance of NTP by District for Construction	20%

Completion of final design review for SCE Interconnection Facilities/Distribution Upgrades	7%
Completion of Construction kickoff meeting and distribution of meeting minutes	5%
Completion of SCE's Interconnection Facilities and Distribution Upgrades construction scope	7%
Completion of PTO by SCE	16%
Completion of COD by PPA Provider	5%
Delivery of updated (as-built) savings proformas to District	5%
Completion of Punchlist & delivery of all project closeout documentation to District	5%
Confirmation of SCE's calculation of RES-BCT project Indifference Payment	5%
Total:	100%

TerraVerde Hourly Rate Table (basis for level-of-effort estimate)

Resource Classification	Assigned Resource	Hourly Rate	ACWA Discounted Rate
Principal, Technical Advisor	Rick Brown	$225	$203
EVP Structured Finance		$210	$189
Engineering Director	Ali Chehrehsaz	$205	$185
Sr. Engineer, Project Developer	Jen Petherick	$195	$176
Account Manager	Kevin Ross	$190	$171
Project Manager	Olivia Corkedale	$185	$167
Energy Engineer / Audit Mgr	Robin Weldy	$165	$149
Energy / Financial Analyst	Patrick McKinney	$155	$140
Data Administrator	Ashley Hale	$80	$72

Travel expenses are estimated. Actual expenses will be billed at cost.

We trust the District will find our industry leading experience, analytical capabilities, and knowledge of solar energy PPA project execution to be an excellent fit for the implementation of Las Virgenes – Triunfo Joint Powers Authority Phase 2 Solar Energy Project. In good faith, TerraVerde is prepared to initiate the above described scope of services with a Letter of Intent (LOI) from the District to add this scope of work as an amendment to the existing Consulting Services Agreement. If you have any questions, please feel free to contact me.

Sincerely,

Kevin Ross, VP Business Development
TerraVerde Renewable Partners, LLC
520 E. Avenida Pico #3793
San Clemente, CA 92674-9998
949-212-6555 Kevin.Ross@tvrpllc.com

March 28, 2019 JPA Board Meeting

TO: JPA Board of Directors

FROM: Facilities & Operations

Subject : Leak on 21-inch Trunk Sewer: Declaration of Emergency

SUMMARY:

At approximately 3:30 p.m. on March 12, 2019, staff was informed by California State Park personnel that there was a leak on the JPA's 21-inch trunk sewer on the west side of Las Virgenes Road, south of the Centrate Treatment Facility. Staff estimated the leak to be approximately 20 gallons per minute. Regulatory notifications were made, and staff immediately began the process to contain the spill.

A sandbag dike was placed below the leak, which stopped the flow of sewage to Las Virgenes Creek as of 5:35 p.m. on the same day. Temporary pumps were used to return the contained sewage back to the sanitary sewer via a downstream manhole. On March 13, 2019, an on-call emergency contractor was hired to install a temporary sewer bypass to allow for evaluation and repair of the trunk sewer.

The leak was at the transition of a 21-inch mortar-lined steel pipe to a 21-inch vitrified clay pipe at the downstream end of an exposed crossing for a tributary to Las Virgenes Creek.
The damage appeared to be related to the recent Woolsey Fire as the surrounding area was charred, and the mastic sealing the joint was super-hardened.
At the time of the preparation of this report, the extent of the damages and cost for repair was unknown; however, the total cost was expected to potentially exceed $35,000. Additional details on the incident will be provided at the Board meeting.

RECOMMENDATION(S):

Pass, approve and adopt proposed Resolution No. 7, declaring an emergency that requires immediate action without delay to repair a leak on a 21-inch trunk sewer.

RESOLUTION NO. 7

A RESOLUTION OF THE GOVERINING BOARD OF THE LAS VIRGENES-TRIUNFO JOINT POWERS AUTHORITY FINDING THAT AN EMERGENCY WILL NOT PERMIT A DELAY RESULTING FROM A COMPETITIVE SOLICITATION FOR REPAIR OF A 21-INCH TRUNK SEWER ON THE WEST SIDE OF LAS VIRGENES ROAD, SOUTH OF THE CENTRATE TREATMENT FACILITY

(Reference is hereby made to Resolution No. 7 on file in the JPA's Resolution Book and by this reference the same is incorporated herein.)

FISCAL IMPACT:

Yes

ITEM BUDGETED:

No

FINANCIAL IMPACT:

Sufficient funds are available in the adopted Fiscal Year 2018-19 JPA Budget for this work.

Prepared by: David R. Lippman, P.E., Director of Facilities and Operations

ATTACHMENTS:

Proposed Resolution No. 7

RESOLUTION NO. 7

A RESOLUTION OF THE GOVERINING BOARD OF THE LAS VIRGENES-TRIUNFO JOINT POWERS AUTHORITY FINDING THAT AN EMERGENCY WILL NOT PERMIT A DELAY RESULTING FROM A COMPETITIVE SOLICITATION FOR REPAIR OF A 21-INCH TRUNK SEWER ON THE WEST SIDE OF LAS VIRGENES ROAD, SOUTH OF THE CENTRATE TREATMENT FACILITY

WHEREAS, at approximately 3:30 p.m. on March 12, 2019, staff was informed by California State Park personnel of a leak on the JPA's 21-inch trunk sewer on the west side of Las Virgenes Road, south of the Centrate Treatment Facility;

WHEREAS, staff responded immediately to the incident, made the required regulatory notifications and began the process to contain the spill;

WHEREAS, a sandbag dike was placed below the leak, fully containing the spill by 5:35 p.m. on the same day, and temporary pumps were used to return the contained sewage back to the sanitary sewer system via a downstream manhole;

WHEREAS, a leak was observed on the JPA's 21-inch trunk sewer at the abutment for a crossing over a tributary to Las Virgenes Creek where the sewer transitions from steel to clay pipe;

WHEREAS, the damage to the sewer appears to be related to the recent Woolsey Fire as the surrounding area was charred, and the mastic sealing the joint was super-hardened;

WHEREAS, a competitive bidding process is normally required for construction projects involving an amount of $35,000 or more pursuant to California Public Contract Code §20642;

WHEREAS, one exception to the requirement to give notice for bids to let such contracts is in the case of emergency;

WHEREAS, “emergency” means a sudden, unexpected occurrence that poses a clear and imminent danger, requiring immediate action to prevent or mitigate the loss or impairment of life, health, property, or essential public services (California Public Contract Code §1102);

WHEREAS, in an emergency, the JPA may, pursuant to California Public Contract Code §22050, repair or replace a public facility, take any directly related and immediate action required, and procure the necessary equipment, services, and supplies for those purposes without engaging in the competitive bidding process; and

WHEREAS, staff recommends an emergency declaration to perform emergency repairs, including installation of a temporary sewer bypass, video camera inspection of the interior of the 21-inch trunk sewer, repair of the leak and restoration/clean-up of the surrounding area.

NOW, THEREFORE, BE IT RESOLVED BY THE GOVERINING BOARD OF THE LAS VIRGENES-TRIUNFO JOINT POWERS AUTHORITY AS FOLLOWS:

1. Substantial evidence supports a finding that the above-described circumstances constitute an emergency that will not permit a delay resulting from a competitive

solicitation for bids and the above-described actions are necessary to respond to this emergency.

2. The Board authorizes the Administering Agent/General Manager to proceed with the above-described actions in response to this emergency.

3. The Board shall review these emergency actions at the next Board meeting and, if those actions continue, shall terminate those actions at the earliest possible date that conditions warrant so that the remainder of the emergency actions may be completed by giving notice for bids to let contracts should sufficient time then exist to secure the necessary services.

PASSED, APPROVED, AND ADOPTED this 28th day of March, 2019.

_____
Janna Orkney, Chair

ATTEST:

_____
Jay Lewitt, Vice Chair

(SEAL)

APPROVED AS TO FORM:

_____
Legal Counsel

March 28, 2019 JPA Board Meeting

TO: Board of Directors

FROM: Facilities & Operations

Subject : Woolsey Fire Facility Repair Project Nos. 1 and 3: Award of Design Contracts

SUMMARY:

On January 4, 2019, a Request for Proposals (RFP) was issued for three Woolsey Fire Facility Repair Projects to address damages at both District and JPA-owned facilities. A single RFP was issued for the three projects, allowing consultants to propose on one or more of the projects to expedite consultant selection and allow competitive bidding of multi-disciplinary work. The damages and scope of work for repairs vary significantly between the facilities. Woolsey Fire Facility Repair Project No. 1 is for the Rancho Las Virgenes Composting Facility, No. 2 is for the Westlake Filtration Plant and No. 3 is for District Headquarters, Rancho site work and multiple remote tank and pump station sites. Repair of damages to JPA-owned facilities is included in Project Nos. 1 and 3. Project No. 2 is associated with an LVMWD-only facility, the Westlake Filtration Plant.

Proposals were received from six different firms or teams, as several of the consultants chose to collaboratively submit proposals with the design work split between different firms based on the specific nature of repair work required at each facility.

M6 Consulting, Inc. is recommended for Woolsey Fire Facility Repair Projects Nos. 1 and 2 as they offered the best value, a comprehensive project understanding and scope of work, and experience in disaster recovery efforts for the disciplines necessary for repair of the facilities. In addition, L. Newman Design Group, Inc. is recommended for Woolsey Fire Facility Repair Project No. 3 due to their proposed value, experience with District facilities related to landscaping and irrigation, project understanding and consistency as they are also included as a landscape architectural sub-consultant for the projects proposed to be designed by M6 Consulting, Inc.

The above-described recommendations were presented to the LVMWD Board on March 26, 2019, reflecting the need for approval and acceptance with respect to the LVMWD-only facilities. The remaining portions of the work, including Project No. 1 and elements of Project No. 3, are for JPA facilities and, therefore, presented to the JPA Board for approval and acceptance.

RECOMMENDATION(S):

Accept the proposal from M6 Consulting Inc.; authorize the Administering Agent/General Manager to execute a professional services agreement, in the amount of $121,380 contingent

upon the LVMWD's approval of its share of the cost; and appropriate $46,955 for the JPA's share of the engineering design and support services during construction for the Woolsey Fire Facility Repair Project No. 1.

Accept the proposal from L. Newman Design Group, Inc.; authorize the Administering Agent/General Manager to execute a professional services agreement, in the amount of $122,105 contingent upon the LVMWD's approval of its share of the cost; and appropriate $46,112.25 for the JPA's share of the engineering design and support services during construction for the Woolsey Fire Facility Repair Project No. 3.

FISCAL IMPACT:

Yes

ITEM BUDGETED:

No

FINANCIAL IMPACT:

Since these projects were the result of the Woolsey Fire, no funds for them were included in the adopted Fiscal Year 2018-19 JPA Budget. The two proposals total $243,485, including $93,067.25 for JPA-owned facilities and $150,417.75 for LVMWD-owned facilities. A total additional appropriation of $93,067.25 is required to fund the portion of work associated with JPA-owned facilities. It is anticipated that the costs associated with the professional services for these projects will be reimbursed through the CalOES and/or FEMA. The total award amounts for each proposal are contingent upon LVMWD's approval of its share of the costs, which was recommended on March 26, 2019.

DISCUSSION:

On January 29, 2019, the LVMWD Board declared an end to the state of emergency due to the Woolsey Fire that broke out on the afternoon of Thursday, November 8, 2018 in Ventura County near the Santa Susana Field Laboratory. The fire quickly spread into the JPA's service area due to low relative humidity and strong Santa Ana winds. Damage from the fire occurred at numerous sites including: the Westlake Filtration Plant, Rancho Las Virgenes Composting Facility, LVMWD Headquarters, tanks sites, pressure reducing stations, pump stations and other miscellaneous facilities. Many of the JPA and LVMWD facilities that experienced significant damage required both immediate action to restore normal water and wastewater services, and longer term recovery and repair efforts. The items of repair intended under this portion of work falls under the long-term recovery efforts to restore the pre-fire condition of the facilities.

The work described in the RFP was split into three separate projects, identified as Woolsey Fire Facility Repair Project Nos. 1, 2 and 3. Following is a brief description of the three projects and necessary repairs:

Project No. 1: Rancho Las Virgenes Composting Facility

- Exterior windows/frames in amendment and cure buildings

- Mechanical and electrical equipment related to materials handling including the truck dump system, bag systems and conveyors.
- Roof system and architectural façade of the building.
- Foul air biofilters and piping
- Recycled water fill station and piping
- Ancillary items including decorative fencing, signs, light bollards, yard piping and above ground appurtenances

Project No. 2: Westlake Filtration Plant (LVMWD-only)

- Chemical pumps, piping and equipment for the chemical pump room.
- Electrical lighting, outlets, boxes and electrical appurtenances.
- Arcade along the south and eastern faces of the building.
- Roofing damage including repair of holes, leaking vent piping, burned PVC liners and roofing tiles. Construction and material alternatives will be identified to improve fire resiliency.
- Irrigation piping, valves, control boxes and supporting appurtenances to establish new growth to stabilize slopes.
- Re-landscaping and development of BMP improvements for erosion control, including but not limited to hydro-seeding, straw waddles, silt fencing, etc.

Project No. 3: LVMWD Headquarters, Reservoir No. 2, Rancho and Misc. Facilities

Landscaping and irrigation restoration at the following sites:

- Westlake Pump Station
- Seminole Pump Station
- Reservoir No. 2 (Recycled Water)
- Kimberly Tank
- Torchwood Tank
- Indian Hills Tank
- Ranch View Tank
- Morrison Tank
- Seminole Tank
- Jed Smith Tank Nos. 1 and 2
- Lower Oaks Tanks
- Latigo Tank
- Cordillera Tank
- Headquarters
- Rancho
- Centrate Tank/Farm Control Building Site

The RFP stipulated that the projects could be awarded separately or combined as a single contract at the JPA's discretion. Consultants were required to clearly identify their proposed costs associated with each specific project and were allowed to propose on any or all of the projects.

The RFP was advertised on the LVMWD's website, and staff received proposals from the following six qualified firms:

Woolsey Fire Facility Repair Projects - Proposals			
	Project 1	**Project 2**	**Project 3**
M6 Consulting, Inc.	$46,955	$74,425	
Thornton Tomasetti	$281,190	$205,485	$342,495
L Newman			$122,105
Stantec*	$64,166	$69,042	$63,660
Cordoba Corp*	$34,100	$53,847	$78,850
Cannon		$179,574	

While Stantec and Cordoba Corporation's proposals appeared to be lower than those recommended, they were considered to be non-responsive because they only offered fees through the preliminary design phase of the projects. The other consultant proposals included full scoping of services through the construction phases of work.

The projects were organized to account for the specific disciplines of work required for construction; however, due to the complexity of the work and overlapping scope of for LVMWD and JPA facilities, it was appropriate to separate funding appropriations based on the ownership of the various facilities.

Prepared by: Eric Schlageter, P.E., Senior Engineer

ATTACHMENTS:

Proposal by M6 Consulting, Inc.

Proposal by L. Newman Design Group, Inc.

LAS VIRGENES MUNICIPAL WATER DISTRICT

WOOLSEY FIRE FACILITY REPAIRS

PROPOSAL FOR SITE ASSESSMENT, DESIGN, CONSTRUCTION MANAGEMENT AND INSPECTION SERVICES
MARCH 1, 2019

m6 Consulting, Inc.
4165 E. Thousand Oaks Blvd, Suite 355
Westlake Village, California 91362

4165 Thousand Oaks Blvd, Suite 355
Westlake Village, California 91362
805 379 1015 Phone

March 1, 2019

Mr. Eric Schlageter, PE
Senior Engineer
Las Virgenes Municipal Water District
4232 Las Virgenes Road
Calabasas, California 91302

Subject: Proposal for Woolsey Fire Facility Repairs: Projects 1 and 2
Site Assessment, Design, Construction Management and Inspection Services

Dear Eric,

Thank you for the opportunity to provide our Proposal for Site Assessment, Design, Construction Management and Inspection Services for the Woolsey Fire Facility Repairs Project to the Las Virgenes Municipal Water District (LVWMD) "District". We are pleased to present this Proposal, which reflects the capabilities of our firm to provide the requested scope of services to the District.

The Woolsey Fire of November, 2018 impacted 66% of the District's service area and numerous District facilities, including their Rancho Las Virgenes Composting Facility, Westlake Filtration Plant, Headquarters, and miscellaneous tank sites and associated site improvements. Following the fire, District staff coordinated with representatives of FEMA, California Governor's Office of Emergency Services (CAL OES) and the County of Los Angeles to identify the estimated scope of facility damage, and released a Request for Proposals (RFP) to procure services of professionals to assist with site assessment, scoping, design and construction period services necessary to enable the restoration of damaged facilities to their previous condition and function.

In conjunction with the disaster recovery effort, the District contacted m6 Consulting to assist with site damage assessments and determinations relative to the safety and continued operations of the Rancho Las Virgenes Composting Facility (Project 1) and the Westlake Filter Plant (Project 2). **In response to the District's RFP, m6 is providing a proposal for Projects 1 and 2.**

Our company distinguishes itself by providing a high level of service to a select group of clients. Company principals are directly involved in day to day operations, allowing for a focused presence and leadership in project design and analysis. Our company provides project management, engineering design and review services for the cities of Calabasas, Westlake

Village, West Hollywood, Hermosa Beach, Oxnard, Goleta and Santa Monica, as well as the 23 campuses of the California State University (CSU) System, Community College District, and the Office of the State Fire Marshal (OSFM). m6 team members have served their clients as building officials, plan reviewers, inspectors, city engineers, public works directors, and project managers, and have provided both leadership and support to municipalities in all areas of building and safety and public works functions. The m6 team is unique in their blend of experience in the design of private development grading, drainage, infrastructure, inspection and assessment of building sites and associated vertical construction, as well as the coordination and management of bid processes, agency approvals and construction. Our current and past roles as city engineers, capital projects engineers and program managers for municipal organizations provides for a knowledgeable and holistic approach to project design development, disaster recovery, permitting and construction.

The m6 team members have worked together for years, and are joined on these projects by Mr. Robert Bombardier and his staff at L. Newman Design Group, Inc. (LDDG), a leading local landscape architectural design firm based in Westlake Village with 45 years of experience in serving both municipalities and private clients in planning, design and horticultural consultation. Our firms have worked collaboratively on multiple projects over the past 10 years, including the US 101/Lindero Canyon Road Interchange, the Westlake Village Community Park, and other roadway and infrastructure projects throughout the City of Westlake Village.

Summary of Qualifications

Our design team provides comprehensive technical expertise and context-sensitive understanding of municipalities and the nuances of design, project assessment, and State/Federal agency (CAL OES/FEMA) coordination, review, funding, and reimbursement. Our team members are engaged in the support of public agencies on a routine basis, and are well versed in the complexities of navigating projects through the regulatory, permitting and disaster recovery process. The m6 team is unique in its diversity and depth of experience, with the capability to both understand the complexities of design, approval and permitting processes and translate these requirements to local agency officials, contractors and community members alike.

Key Qualifications:

- Knowledgeable staff familiar with local agencies, conditions and design environment
- Have completed design, coordination, permitting and relocation of LVMWD facilities in local jurisdictions
- Familiar with CAL OES/FEMA processes, project development, funding and reimbursement, based on multiple projects in Los Angeles, Ventura and Santa Barbara

County
- Proprietary understanding of the priorities and needs of LVMWD
- Integrated concept-to-construction understanding of project development, agency coordination, consultation and approval.

Authorized Signature

The following individual is authorized to negotiate and contractually bind the Consultant:

Robert P. Woodward, PE, Principal
4165 East Thousand Oaks Boulevard, Suite 355
Westlake Village, California 91362
(805) 379-1015 (Phone)
robert@m6consultinginc.com

Closure

We appreciate the opportunity to present our proposal to the Las Virgenes Municipal Water District. Please feel free to contact me with any questions you may have regarding our proposal and related scope of services. Thank you for your consideration.

Sincerely,

m6 Consulting, Inc.

Robert Woodward, PE
CAL OES SAP Evaluator #82476
Principal

PROPOSAL
SITE ASSESSMENT, DESIGN, CONSTRUCTION MANAGEMENT AND INSPECTION SERVICES

1.0 FIRM INFORMATION AND EXPERIENCE

m6 Consulting, Inc (m6) is a locally-based company providing plan review, inspection, permitting, project management and engineering services to local municipal clients as well as the State of California. Our principal office is located at 4165 East Thousand Oaks Boulevard, Suite 355, in Westlake Village.

Clients

Our company provides development review and design engineering services for the cities of Calabasas, Westlake Village, West Hollywood, Hermosa Beach, Oxnard, Goleta, and the Las Virgenes Municipal Water District (LVMWD), as well as the 23 campuses of the California State University (CSU) System, Community College District, and the Office of the State Fire Marshal (OSFM). m6 team members have served their clients as building officials, plan reviewers, inspectors, city engineers, public works directors, and project managers, and have provided both leadership and support to municipalities in all areas of building and safety and public works functions. The m6 team is unique in their blend of experience in the design of private development grading, drainage, infrastructure, inspection and assessment of building sites and associated vertical construction, as well as the coordination and management of bid processes, agency approvals and construction.

Engineering and Assessment

m6 provides engineering design, assessment and reporting capabilities for architectural, and structural design projects in multiple jurisdictions. Our company maintains specialized capability in structural design assessment and inspection, with ICC certified inspection staff and engineers certified under Cal OES/FEMA's Structural Assessment Program (SAP) as post-disaster evaluators. Complimentary to these capabilities is expertise in the design of grading, drainage and public works improvements and infrastructure, which allows for a complete and comprehensive characterization of a proposed building site horizontal and vertical design and understanding. This hybridized capability is complemented by cutting edge technical knowledge, and supplemented by capabilities in FEMA floodplain review, hazard mapping, damage inspections, documentation, and Cal OES/FEMA disaster recovery process mapping, development and grant application preparation.

Disaster Assistance/Recovery

m6 has provided disaster-related recovery assistance and services to cities in Los Angeles, Ventura and Santa Barbara Counties. These services include damage inspections and documentation, coordination with City, County, State (Cal OES) and federal (FEMA/FHWA) staff, and related damage assessment, reporting, cost tracking and reimbursement. m6 team members include former FEMA and Cal OES officials, who can provide knowledgeable navigation of State and federal code requirements related to Cal OES and FEMA disaster funding. The declaration of a federal disaster creates opportunities for grant funding for mitigation activities that will address future disasters and related preparedness. m6 has prepared mitigation grant proposals for multiple cities to access funding through FEMA's Hazard Mitigation Grant Program (HMGP), with associated technical documentation and benefit-cost assessments (BCA's). In recent years, m6 has provided disaster assistance and related management of projects for the cities of Calabasas, West Hollywood, Oxnard and Goleta.

Woolsey Fire and Recovery

More recently, m6 has been providing post-disaster services to the City of Calabasas and the unincorporated areas of the County in the aftermath of the Woolsey Fire. m6 staff have provided damage assessments and related evaluations for residential, commercial, and flood control facilities affected by fire, to support postings of use restrictions or prohibitions per the ATC-20 evaluation program. These assessments provide the basis for further evaluations for existing damaged buildings to be repaired in conjunction with the provisions of the Existing Building Code, and inform the discussions with property owners and their design consultants.

Concurrent with damage assessment, the City of Calabasas initiated communication with owners of fire damaged properties to facilitate the process of recovery and re-building of damaged properties. Working in consultation with the City's Planning Division, m6 is developing process documents to assist with streamlining the City's Planning and Building plan check process. Elements of process development include allowances for like-for-like rebuilds, options for re-use of existing foundations, non-conforming structures, and requirements for debris removal from damaged properties. Key considerations are those process details which encourage rapid repair and reconstruction of damaged properties, minimize lengthy Planning and Building approval processes, while respecting the character of the neighborhoods and the spirit of the City's development process.

Regulatory/Outside Agencies

m6 staff has extensive experience coordinating reviews with outside agencies, including Fire Departments, Flood Control Districts, Water Districts, Fish and Game, Corps of Engineers, Coastal Commission, Caltrans, various departments of the County of Los Angeles, and the Regional Water Quality Control Board. Our staff members have both public and private design, development and review experience, and this diversity of experience allows for a unique insight and understanding of the nuances of project development, review, conditioning and approval. The m6 team, with their depth and diversity of experience, is provided to the District in combination with local presence, working knowledge of the disaster area, and specific capabilities as reflected below.

City of Calabasas

In 2014 the City of Calabasas retained m6 Consulting to improve their plan check, project review and delivery process. They recognized that the combination of difficult soils, adverse topographic conditions and complex construction methodologies require a special kind of 'hybrid' design reviewer that could review across the disciplines of planning, public works and building and safety relative to design standards, building codes and land use regulation. With the growing complexity of the City's planning, entitlement and development review process, there was a clear need to identify, anticipate and condition issues related to site development and building engineering early in the development review process. m6 has assisted the City in improving these portions of the development review process, as well as improving interdepartmental communication and coordination between Planning, Public Works and Building and Safety. m6 currently provides the City with building plan check services, inspection, permit center staffing, code enforcement support, public works plan check and project management services.

More recently, m6 has been assisting the City with fire damage assessments, structure inspections and the formulation of fire damage repair policies to assist residents and businesses in the reconstruction process.

City of Hermosa Beach

In 2016, the City of Hermosa Beach retained m6 to provide City Engineering and development review services for their Public Works Department. Services provided to the City include review of development projects and associated project design plans and related reports, grading, drainage, infrastructure and public right of way improvements. Hermosa Beach is an established community which is experiencing a large volume of re-development projects in an environment of aged infrastructure with limited capacity. As a built-out community, Hermosa Beach has had limited experience with large development and re-development projects, and they have retained m6 to assist with developing policies

and procedures, checklists, process mapping, project conditioning and entitlement review. Complex infill projects often involve sophisticated design and excavation techniques, innovative technology, difficult utility relocations and traffic handling. m6 reviews grading, drainage, shoring, sewer, storm drain, lot line adjustments and parcel maps, as well as roadway improvement plans. Many projects require street vacations, easement re-conveyance and utility relocations. m6 has assisted Public Works with establishing a preliminary design review process that provides for feasibility review during the early stages of design and environmental documentation. This ensures that items critical to the City's infrastructure and project feasibility are identified and established during the early stages of project development.

City of West Hollywood

The City of West Hollywood retained m6 to assist in building life safety, structural, disabled access, mechanical, plumbing and electrical plan review, as well as providing building official support and process mapping for the Community Development Department. Development projects located in West Hollywood often contemplate complex additions to existing buildings and re-development in built conditions to allow for vertical city growth. This vertical urbanization results in development proposals which are innovative from an architectural and structural standpoint, often involving high-rise structures and subterranean construction. m6 assists the City in the review of these projects by providing remote plan check services and maintaining effective and efficient communication with both City staff and building permit applicants.

Other efforts included the development of funding application under FEMA-DR-4382-CA for seismic retrofitting of soft-story multi-family structures for a total of $5,000,000 through FEMA's Hazard Mitigation Grant Program (HMGP). The initial application was approved by FEMA, and m6 will proceed to prepare a formal sub-application to FEMA/Cal OES. The program builds on the City's seismic retrofit ordinance, which requires property owners to retrofit their seismically-vulnerable structures, providing a potential funding source to assist owners with the required repairs. In consultation with Cal OES/FEMA, m6 will develop a formal sub-application, outline a program for property prioritization, owner funding application to City, with means of accounting, cost control and reimbursement for funding allocations. m6 will develop technical documentation and benefit-cost analysis (BCA) calculations to support the City's application for funding, which is planning for completion in April, 2019.

City of Oxnard

The City of Oxnard retained m6 to assist in project management of selected projects for the City's Department of Public Works. This project included the review of regional Groundwater Sustainability Plan (GSP) on behalf of the City in regards to the State's

Sustainable Groundwater Management Program. m6 reviewed trends in groundwater extraction limitations for agricultural users versus prospective expansion of water recycling facilities with storage and sale of reclaimed water, and helped develop a strategic vision for balance of water re-use, facility upgrades, storage and water allocation to offset costs of imported water (Metropolitan) while maintaining capacity to serve expanded commercial and residential development. m6 developed a grant application for State Proposition 1A Groundwater Program to fund injection wells, allowing for increased recycled water storage and mitigation of contamination of potable underground water by seawater intrusion.

Other efforts included the development of funding applications under FEMA-DR-4353-CA (Thomas Fire) for seismic retrofitting of the City's seawalls, critical facility upgrades, and mitigation of system vulnerabilities related to power loss (6 projects total) with associated technical documentation and benefit-cost analysis (BCA) calculations.

City of Goleta

The City of Goleta retained m6 to assist with the management of the City's program of capital improvement projects and assist the Director with analysis of project management staff and project delivery for the Department of Public Works. The Director and City Manager desired the optimization of staff effort with respect to workload and consultant support, in order to execute an extensive program of road, bridge, City parks, traffic and rail projects, many with grant funding and associated project delivery deadlines. m6 provided training, coaching, and mentoring for City Public Works staff, assisted with consultant selection, and assumed direct management responsibility for multiple projects. m6 guided staff on the development of criteria for pursuit of various grant funding sources (Highway Bridge Program (HBP), Measure A, Safe Routes to School (SR2S), Environment Enhancement Mitigation Fund (EEMP), Community Development Block Grant (CDBG), SB1, others), to identify and prioritize staff effort relative to project type and funding viability. m6 developed a program management 'dashboard' for City Manager to organize capital projects by type, funding sources, risks, and significant deadlines/activities. Upon the Director's resignation, m6's Robert Woodward and Masoud Mahmoud assumed the role of interim Public Works Director and City Engineer respectively, at the request of the City Manager. During this period, m6 supervised the development of the City's Amtrak Station project, which included the acquisition of right of way, the development of station design, the evaluation of over and under-crossing options for vehicle, bike and pedestrian structures to traverse US Highway 101 and , and the acquisition of funding for the design and construction of the station and associated site improvements through the California State Transportation Agency's (CalSTA) Transit and Intercity Rail Capital Program (TIRCP). m6 coordinated fee study updates, developed cooperative/master agreements, improved inter-departmental communication and coordination between Public Works and Community Development, prepared staff

reports and presentations for the City's Council, Planning Commission, and Parks Commission, and supported the City Attorney's Office with technical documentation, review and analysis.

Other efforts included the management of winter storm damage recovery related to disaster events FEMA-4305-DR-CA (January 2017 Storms), FEMA-4308-DR-CA (February 2017 Storms), with associated damage surveys, reporting, design, repair and outside agency (County Flood Control, Cal OES, FEMA, USACE, CDFG, RWQCB) coordination. Storm damage projects included a flood control channel repair (including articulated revetment, fish ladders, rip-rap scour protection), damaged cribwall (FHWA-ER Program) and debris removal. In association with disaster FEMA-4301-DR-CA, m6 prepared a successful grant proposal for funding of a $750,000 seismic retrofit of the City's Goleta Valley Community Center through FEMA's Hazard Mitigation Grant Program (HMGP).

2.0 PROJECT UNDERSTANDING

In accordance with the requirements of the Request for Proposals we offer the following understanding and approach for the delivery of the required site assessment, scoping, preliminary design report preparation, design and specification preparation and construction period services for the project. The project entails the independent assessment of the LVMWD facilities damaged by the recent Woolsey Fires, development of scope of work, cost estimates, repair plans and specifications, and provision of construction management and inspection services for the repair efforts related to the Rancho Las Virgenes Composting Facility and Westlake Filter Plant. The effort is intended to be compliant with Cal OES and FEMA contracting and funding requirements, to facilitate the qualification of associated project development, design, construction and administrative efforts for reimbursement under FEMA's Public Assistance Program.

3.0 SCOPE OF WORK

In accordance with the requirements of the Request for Proposals and Section 2.0 Project Understanding we propose the following scope of work for the Woolsey Fire Facility Repair Project. The project understanding and associated scoping sections are divided between Project 1 – Rancho Las Virgenes Composting Facility and Project 2 – Westlake Filter Plant for clarity and conformance with the District's instructions for division of the respective Projects.

Project 1: Rancho Las Virgenes Composting Facility

The Composting Facility is located on Las Virgenes Road in Calabasas, and consists of a complex of buildings and associated site improvements. Portions of the existing site, including landscaping, irrigation, guard rails, above-ground water appurtenances (hydrants, blow-offs, air-vacs, cabinets) were damaged by the fire. Additionally, portions of the Amendment Building exterior and conveyance inlets, chutes and equipment were damaged by the fire, which involved the building on 3 sides. The conflagration of material in the exterior and interior portions of the material conveyor may have damaged structural members utilized for support of the function, including the W10x22 and W18x86 members which frame the grated portion of the inlet assembly. This assembly and associated structural supports will be investigated in conjunction with the site assessment, to determine the extent to which these components will be added to the project scope of work. Related portions of the material conveyors and electrical wiring system will be inspected to determine extents of damage and required re-work. Additionally, the facility eaves and roof structure will be evaluated for fire and related heat damage, and the extents of repair affirmed as part of project scoping.

Specifically, we propose the following scope of work, in accordance with the District's RFP:

Site Assessment and Scope of Work Development

m6 will perform a detailed review of the facility, and assess damages to architectural, structural, electrical, mechanical and plumbing components of the building, as well as exterior landscape, irrigation and other site components. Based on the detailed site assessment, m6 will develop a scope of work necessary to restore damaged components of the building and site to their pre-disaster condition. Scope development will be coordinated with District staff, and m6 will facilitate a scoping meeting to present findings, identify repair options, and receive feedback from staff.

Preliminary Design Report (PDR) Preparation

m6 will prepare a Preliminary Design Report (PDR) based on the approved scope of work, which integrates staff input and direction. The PDR will summarize the findings of the site assessment, with associated scope of work, estimate of cost, and schedule for development of PS&E, bidding, award, construction and close-out. The PDR will be submitted to the District for review and approval.

Design, Plan, Specification and Estimate (PS&E) Preparation

In accordance with the approved scope delineated in the PDR, m6 will prepare plans, specifications and engineer's estimates (PS&E) to delineate the required work for contract, bid and construction of the restoration improvements. The project scope is anticipated to include the items noted in the scope reflected in the District's RFP, with specific elements and limits of work in accordance with the approved District scope of work. The project construction documents will be developed in conformance with State and Federal requirements to insure that the efforts associated with the facility fire repair and restoration reflect qualifying activities under FEMA project development and public assistance guidelines, and are eligible for reimbursement under the FEMA PA program.

For the purposes of environmental assessment, it is presumed that the nature of the repair and restoration activities contemplated in the District's scope of work would represent a de-minimis level of environmental analysis, and would qualify as an exempt activity under NEPA/CEQA.

Bid and Construction Period Services

During the project bid and construction period, m6 will provide support in the form of meeting attendance, review and response to contractor RFI's, submittals, perform field

inspections, construction management, and grant coordination. A complete scope of work and related fee is provided in Attachment 1.

Project 2: Westlake Filtration Plant

The Westlake Filtration Plant is located in the City of Westlake Village, near the end of Three Springs Drive, and consists of a concrete-masonry-unit (CMU) filtration equipment building with a wood facade and associated site improvements. Portions of the existing building were damaged by the fire, in particular the arcade along the south and eastern sides of the building. The arcade is an architectural component of the building façade, consisting of a system of wood-framed archways supporting a tile structure above. Fire damaged an unknown extent of the arcade, with loss of internal support of interior wood framing and beams due to the migration of fire through un-blocked portions of the structure. Fire damaged chemical pumps and associated piping and electrical equipment contained in an adjacent enclosed wood framed portion of the building adjacent to the arcade. Additionally, fire crews created ventilation openings in the metal roof of the CMU building, severely damaging the roof structure in 2 locations.

We propose the following scope of work, in accordance with the District's RFP, our observations, and knowledge of the process for approval through the City of Westlake Village and County of Los Angeles:

Site Assessment and Scope of Work Development

m6 will perform a detailed review of the facility, and assess damages to architectural, structural, electrical, mechanical and plumbing components of the building, as well as exterior landscape, irrigation and other site components. Based on the detailed site assessment, m6 will develop a scope of work necessary to restore damaged components of the building and site to their pre-disaster condition. Scope development will be coordinated with District staff, and m6 will facilitate a scoping meeting to present findings, identify repair options, and receive feedback from staff.

Preliminary Design Report (PDR) Preparation

m6 will prepare a Preliminary Design Report (PDR) based on the approved scope of work, which integrates staff input and direction. The PDR will summarize the findings of the site assessment, with associated scope of work, estimate of cost, and schedule for development of PS&E, bidding, award, construction and close-out. The PDR will be submitted to the District for review and approval.

Design, Plan, Specification and Estimate (PS&E) Preparation

In accordance with the approved scope delineated in the PDR, m6 will prepare plans, specifications and engineer's estimates (PS&E) to delineate the required work for contract, bid and construction of the restoration improvements. The project scope is anticipated to include the items noted in the scope reflected in the District's RFP, with specific elements and limits of work in accordance with the approved District scope of work. The project construction documents will be developed in conformance with State and Federal requirements to insure that the efforts associated with the facility fire repair and restoration reflect qualifying activities under FEMA project development and public assistance guidelines, and are eligible for reimbursement under the FEMA PA program.

For the purposes of environmental assessment, it is presumed that the nature of the repair and restoration activities contemplated in the District's scope of work would represent a de-minimis level of environmental analysis, and would qualify as an exempt activity under NEPA/CEQA.

Meeting Attendance/City/County Submittal

It is expected that the scope of repair and associated plans and structural calculations will require submittal, approval and permitting by the City of Westlake Village Planning Division, as well as the County of Los Angeles Building and Safety Department. m6 will attend meetings and provide for consultation with the City, and submittal of repair plans to the County, for review and approval prior to the release of the project for construction.

Bid and Construction Period Services

During the project bid and construction period, m6 will provide support in the form of meeting attendance, review and response to contractor RFI's, submittals, perform field inspections, structural observations, construction management, and grant coordination. A complete scope of work and related fee is provided in Attachment 1.

4.0 REPRESENTATIVE PROJECTS

- Rancho Las Virgenes Composting Facility/Westlake Filter Plant. Preliminary site assessment and damage report preparation for LVMWD facilities damaged by the Woolsey Fire.

- City of Calabasas Community Development Department. Preliminary site assessments, ATC-20 evaluations for residential and commercial properties damaged or destroyed by the Woolsey Fire. Assisted the City will developing streamlined processes for fire applications to facilitate rapid processing of damage repair plans and associated engineering reports.

- Seminole Hot Springs Community Recovery. Watershed assessment, reservoir sedimentation evaluation and capacity analysis related to burned watershed and related flow bulking, hydrology/hydraulic analysis of Sierra Canyon Creek to re-evaluate Special Flood Hazard Area associated with current FEMA flood boundary delineation. Coordination with FEMA, County and State regulatory agencies .

- CMWD/LVMWD Interconnect Project. Preliminary design, preparation of a preliminary design report (PDR) and coordination/approval of a regional interconnection pipeline between Calleguas and Las Virgenes Municipal Water Districts.

- LVMWD Air-Vacuum Valve Relocation Project. Design, permitting and construction support for the relocation of air-vac valves associated with the District’s 30” feeder pipeline in the West Valley and Hidden Hills.

- Westlake Village Community Park. Potable/Recycled Water Pump Stations, Extension of LVMWD's recycled water main (Thousand Oaks Blvd), grading, site improvements. $4.2 M.

- Lindero Canyon Road/US 101 Interchange (Westlake Village). Civil/structural design/management of Interchange/Bridge with associated 24" potable water Interim protection/ relocation (Phase 1). 5.2M.

- Lindero Canyon/Agoura Road Bridge Widening (Westlake Village). Civil/structural design, management, right of way acquisition, LVMWD 24" water main protection, dry utility protection and coordination. 1M.

- Roadside Drive Bridge (Agoura Hills). Road and bridge widening, geotechnical investigation, environmental studies, LVMWD water main, SCE transmission, AT&T relocation.

- Reyes Adobe Interchange (Agoura Hills). Project management, Caltrans permitting of twin cased waterlines during construction as part of LVMWD's 1235 Expansion Project.

- Lost Hills Interchange (Calabasas). Civil, structural, environmental design/project management of interchange/bridge with associated LVMWD pipeline relocations and casings for future potable water lines. 28M.

LNDG Water Agency Related Projects:

- Big Sky Pump Station, Simi Valley, Ca
- Mount Sinai Water tank , Simi Valley , Ca
- Parker Ranch Water tank, Simi Valley, Ca
- Lake Sherwood Water tank, Ventura County, Ca
- Cal American water tanks - Newbury Park (City of Thousand Oaks)
- LVMWD Water tank- Oak Park (Pardee Development)
- LVMWD -Westlake- Torchwood tank, (AECOM) Westlake Village, Ca
- LVMWD - Cordillera tank and Pump Station (New Millenium Homes) Calabasas, Ca
- **LVMWD - WESTLAKE FILTER PLANT - LVMWD**

5.0 TEAM MEMBERS

m6 has assembled a unique team of highly qualified professionals with local experience. The m6 team is currently designing, or have completed, many infrastructure designs in Westlake Village as well as Agoura Hills, Calabasas, and other jurisdictions. The m6 principals are joined by a larger group of seasoned professionals and diverse talents in the fields of civil (grading and drainage), structural, mechanical, electrical and plumbing engineering, as well as disaster recovery and related project management and inspection staff.

The m6 team is joined in this effort by L. Newman Design Group (LNDG), a leading local landscape architectural design firm based in Westlake Village with 45 years of experience in serving both municipalities and private clients in planning, design and horticultural consultation.

Robert Woodward, PE
Position: Project Manager
Mr. Robert Woodward has more than 20 years of experience in construction, inspection, design and project management. He has served in various capacities of capital projects engineer, project manager, and city engineer for the Cities of Westlake Village, Agoura Hills, Calabasas, Thousand Oaks, Goleta, Ventura, Big Bear Lake and others. His recent projects include the Lost Hills Interchange (Calabasas/LVMWD), Lindero Interchange, Westlake Village Community Park, Agoura Road/Bridge Widening (Westlake Village/LVMWD), Reyes Adobe Interchange and Roadside Bridge Widening (Agoura Hills/LVMWD).

Mr. Woodward will serve as project manager and the District's point of contact, providing coordination, design, and communication during the final design and permitting processes. He will serve as point of contact for the District, permitting agencies and the contractor during the construction phase of the project.

Masoud Mahmoud, PE, LEED AP
Position: Project Director
Mr. Mahmoud brings 20 years of local agency engineering, design and management of large private development and infrastructure projects to his role as project director. Having formerly worked with the County of Los Angeles Public Works/Water Works Departments, Masoud is well versed in municipal organization and communication. Having served as VP of Construction and Campus Planning for Pepperdine, Masoud managed the design and construction of over 100 million in campus buildings and infrastructure, including a 2M gallon recycled water system, sewer pump station and pipeline connections to the Tapia treatment facility. Masoud will provide coordination of m6 team members, coordinate agency and environmental reviews and maintain

accountability for delivery of work product to the District. He will function as project manager in Mr. Woodward's absence, as well as quality assurance/quality control (QA/QC) manager for the design, construction management and inspection efforts.

Edward "Ed" Alexanians, PE, SE, MS
Position: Senior Structural Engineer
Mr. Alexanians brings more than 40 years of engineering experience to his role as senior structural engineer, with 27 years of plan checking for the County of Los Angeles, including the management of its District plan check operations. His design and review experience includes high and mid-rise buildings, commercial and multi-family occupancies, podium buildings and bridges. Mr. Alexanians' combination of depth of detailed design knowledge, coupled with experience in administration of engineering operations, makes him a powerful resource for the District.

Jimmy Todorov, PE
Position: Project Design Lead
Mr. Todorov has 25 years of experience in a wide range of civil engineering projects. He has extensive expertise in the design and review of infrastructure, grading, and mass transit civil projects, working closely with the City of Los Angeles on various City and Metro projects throughout his career. Mr. Todorov has played a pivotal role in multiple large transit projects, including the Expo II, Eastside (LRT), Orange, Red, Blue and Green Lines, as well as many other mass transit endeavors in California and the surrounding region. His blended knowledge of review, coordination and approval of grading, drainage, roadway and transit projects in complex built environments provides the University a valuable asset in the successful execution of site work reviews associated with complex development proposals.

Nader Shams, PE (Electrical)
Position: Electrical Engineer/Design
Nader Shams has 32 years of experience in design and review, including 8 years as Senior Engineer and Chief Inspector at the County of Los Angeles. Mr. Shams' review and inspection work has included both essential facilities, such as police and fire stations, as well as complex facilities including the Disney Concert Hall, LA/USC Medical Center and Universal Studios.

Kaveh Razavi, PE (Mechanical)
Position: Mechanical Engineer/Design
Mr. Kaveh Razavi brings over 30 years of experience in review and design of mechanical and plumbing systems for both public and private sector. Mr. Razavi reviews plans and design calculations for public and private construction of commercial, residential, and

industrial facilities, including parking garage and atria ventilation and smoke control systems.

Robert Bombardier, L.A. (LNDG)
Position: Landscape Architect, President - L. Newman Design Group
Mr. Bombardier has forty years of experience in the field of landscape architecture. He became a Licensed Landscape Architect in 1984 and is currently the President of the firm. Tasks include client relations, site inventory, conceptual master planning, site analysis, scheduling, production, cost estimating, large-scale projects, pool and water feature design – commercial and residential, technical hydraulics, irrigation design, landscape design, drainage, hardscape design, wetland restoration, architecture, bid specifications, construction documents, construction reviews, and site observation services.

John Oblinger, Horticulturist/Oak Tree Consultant (LNDG)
Position: Horticulturalist, Vice President - L. Newman Design Group
Mr. Oblinger entered the field of ornamental horticulture by working in landscape maintenance and installation, then in retail and wholesale nursery operations including plant propagation. He joined the firm in 1987 and is the principal investigator for residential and commercial horticultural studies that include tree assessment, project coordination, and development of landscape maintenance programs. He is an experienced AutoCAD user.

Mr. Oblinger is associated with the Conejo Valley Botanic Garden (past Board Member) and the California Native Plant Society. Mr. Oblinger holds a Bachelors degree from the University of Massachusetts and has been practicing horticulture for over thirty years.

Daniel McLaughlin, CBO, CPE
Position: *Mechanical and Plumbing Plan Reviewer*
Mr. McLaughlin has 38 years of experience as building inspector, building official, and supervisor for governmental agencies, with duties including performing inspections and plan check for building code compliance, assisting code enforcement and planning departments, as well as supervising and training inspection staff.

Robert Patrick "Pat" Kelly, PE
Position: Senior Project Manager (City Engineering)
Mr. Pat Kelly has well over 40 years of professional engineering experience related to the public works sector starting with his early years as a Senior Civil Engineer Assistant for the County of Los Angeles Flood Control District and ending with his most recent professional endeavor as an Assistant Public Works Director/City Engineer for the City of Santa Barbara, Ca where he dedicated 22 years as a city employee. Prior to working with the City of Santa Barbara, Mr. Kelly has held many respected titles including Associate

Civil Engineer for Boyle Engineering Corporation, Project Engineer for Willdan Associates, Assistant City Engineer for the City of Culver City, and Director of Public Works for the City of Manhattan Beach.

Victor Peterson
Position: Senior Project Manager (Municipal Administration)
Mr. Victor Peterson has more than 37 years of municipal experience, with a background that spans the leadership and direction of both city planning and building and safety divisions of community development departments. Mr. Peterson completed his career in executive management with a tenure of 22 years as Building Official and Environmental Sustainability Director for the City of Malibu. Prior to working in Malibu, Mr. Peterson served as Building Official for the County of Ventura, and well as Deputy Planning Director with the City of Camarillo. His responsibilities have included the oversight of plan review, code enforcement and building division operations in sophisticated regulatory environments, as well as the supervision of subordinate staff. He is well versed in the art of inter-departmental communication and coordination, as well as the business of tactful interaction with members of the community and design professionals alike.

This core of seasoned professionals forms a diversely talented team that brings a deep level of knowledge and expertise to the City of Malibu. They are complemented and supported by a technical plan review and support staff. These young professionals supplement their senior counterparts, providing a creative and energetic balance in project review, administration and execution.

- Nicole Thompson, CPE, EIT
- Zhanna Shin, CPE
- Luis Molina, CPE, EIT
- Teal Pacyna

As a group, they represent m6's vision of organic growth for the future leadership of our company. We are proud to include their resumes, together with ours, in Attachment 2.

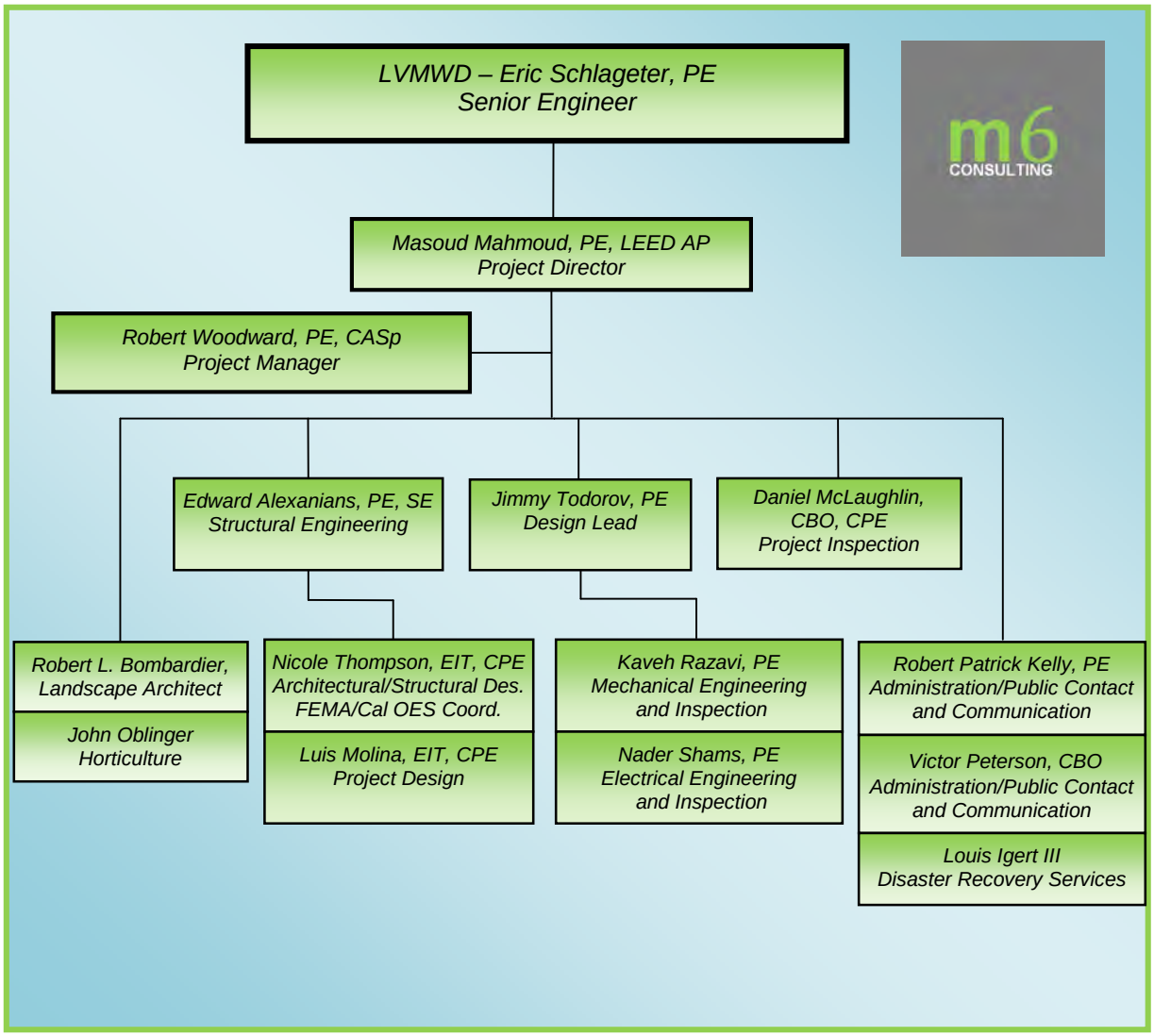
SUMMARY OF PROJECT TEAM MEMBERS AND QUALIFICATIONS

The m6 principals are joined by a larger group of seasoned professionals with diverse talents in the fields of mechanical, electrical and plumbing review, structural engineering, grading, design and inspection. These professionals and their areas of expertise are summarized below.

NAME	QUALIFICATIONS	DISCIPLINE
Masoud Mahmoud, PE	Registered Civil Engineer	Project Director/Team Management
Robert P. Woodward, PE	Registered Civil Engineer Cal OES/FEMA Evaluator	Structural, Grading, Drainage, Site Design, Assessment and Management
Edward Alexanians, PE, SE	Registered Civil Engineer Registered Structural Engineer	Structural Design
Nader Shams, PE	Registered Electrical Engineer	Electrical Design Electrical Inspection
Kaveh Razavi, PE	Registered Mechanical Engineer	Mechanical Design Plumbing Design
Jimmy Todorov, PE	Registered Civil Engineer	Civil Grading and Drainage Design
Mirvat Yacoub, PE	Registered Civil Engineer	Structural/Architectural Design
Victor Peterson, CBO	Building Official Project Administrator	Building Official Project Administration/Coordination
Louis Igert	Disaster Recovery Specialist	Program Coordination, Community Communication, FEMA Interface
Nicole Thompson, EIT, CPE	Subject Matter Expert (SME) Architectural/Engineering	Cal OES/FEMA Coordination
Daniel McLaughlin, CPE	Certified Building Inspector	Plumbing/Mechanical Plan Review and Inspection
Robert L. Bombardier, L.A. (LNDG)	Registered Landscape Architect	Landscape Design
John Oblinger (LNDG)	Certified Arborist	Horticultural Review/Oak Tree Consultation

TEAM ORGANIZATIONAL CHART

The team's organization structure and leadership are illustrated in the subsequent Organization Chart.



Additional Services

Training

m6 team members Robert Woodward, Masoud Mahmoud, Edward Alexanians, and Daniel McLaughlin have routinely provided training in areas of their expertise for agencies and fellow staff members for various municipalities. Robert Woodward has provided grading, drainage, storm drain, retaining wall and building design training to Public Works and Community Development staff. Masoud Mahmoud and Ed Alexanians have provided code training to County staff members for both current code requirements and code updates. Dan Chavin utilizes his 36 years of construction supervision, building inspection and plan review experience to provide training to inspection staff. Collectively, the m6 team utilizes their knowledge of construction, engineering, and code requirements to be an information resource to District staff.

Disaster Assistance and Funding

Upon request, m6 can provide damage inspection, damage recovery and process development, as well as coordination with State and federal agencies for cost tracking and recovery for declared disasters. Further, declared disasters allow for funding opportunities for certain State and federal disaster mitigation programs. m6 can provide grant writing, management and associated coordination for planning and mitigation projects which qualify under program guidelines.

6.0 REFERENCES

1) Ms. Maureen Tamuri, AIA, Community Development Director, City of Calabasas.
Phone: 818 224 1600. Email: mtamuri@cityofcalabasas.com

2) Mr. Sparky Cohen, CBO, Building Official, City of Calabasas
Phone: 818 224 1600. Email: scohen@cityofcalabasas.com

3) Mr. Mark Pestrella, PE, Director, County of Los Angeles Department of Public Works. Phone: 626 458 4300. Email: m.pestrel@dpw.lacounty.gov

4) Mr. John Kelly, PE, Deputy Director, County of Los Angeles Department of Beaches and Harbors. Phone: 310 305 9532. Email: jkelly@bh.lacounty.gov

5) Mr. Adam Ariki, PE, Assistant Deputy Director, County of Los Angeles Department of Public Works/Waterworks. Phone: 626 300-3300 Email: AARIKI@dpw.lacounty.gov

6) Mr. Massood Eftekari, PE, Deputy Director, County of Los Angeles Department of Public Works. Phone: 626 458 4016 Email: meftek@dpw.lacounty.gov

7) Mr. Robert Yalda, PE, TE, Public Works Director/City Engineer, City of Calabasas.
Phone: 818 224 1600. Email: ryalda@cityofcalabasas.com

8) Mr. John Knipe, PE, Public Works Director/City Engineer, City of Westlake Village. Phone: 818 706 1613. Email: john@wlv.com

9) Mr. Lucho Rodriguez, PE, Public Works Deputy City Engineer, City of Hermosa Beach. Phone: 310.318.0210. Email: lrodriguez@hermosabch.org

10) Rosemarie Gaglione, PE, Public Works Director, City of Oxnard.
Phone: 805.385.8055 Email: rosemarie.gaglione@oxnard.org

11) Michelle Greene, City Manager, City of Goleta.
Phone: 805 961 7501. Email: mgreene@cityofgoleta.org

12) Mr. John Zhao, PE, Principal Engineer, Las Virgenes Municipal Water District. Phone: 818 251 2230. Email: jzhao@lvmwd.com

7.0 FEES

We have reviewed the needs of the District based on the RFP, and propose a schedule of tasks with associated hourly effort and fees, in our Cost Proposal: Attachment 1.

Attachment 1

Cost Proposal

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805 379 1015 Phone

March 1, 2019

Mr. Eric Schlageter, PE
Senior Engineer
Las Virgenes Municipal Water District
4232 Las Virgenes Road
Calabasas, California 91302

Subject: **Proposal for Woolsey Fire Facility Repairs**
Site Assessment, Design, Construction Management and Inspection Services
Cost Proposal: Projects 1 and 2

Dear Eric,

In accordance with the requirements of the Request for Proposals, we propose the following tasks to support the scope of work. The required tasks and associated effort are divided between Project 1 – Rancho Las Virgenes Composting Facility and Project 2 – Westlake Filter Plant for clarity and conformance with the District's instructions for division of the respective Projects. The projects contemplate similar tasks and associated efforts, though Project 2 includes a landscape component, with efforts provided by LNDG. Their tasks are summarized in their proposal, included with m6 cost break-downs in Exhibit C, with associated costs included in Exhibit B.

Project 1: Rancho Las Virgenes Composting Facility

Task 101. Site Assessment and Scope of Work Development: m6 will perform a detailed review of the facility, and assess damages to architectural, structural, electrical, mechanical and plumbing components of the building, as well as exterior water appurtenances, irrigation and other site components. Based on the detailed site assessment, m6 will develop a scope of work necessary to restore damaged components of the building and site to their pre-disaster condition. Scope development will be coordinated with District staff, and m6 will facilitate a scoping meeting to present findings, identify repair options, and receive feedback from staff. A total of 20 hours is allocated to this Task.

Task 102. Preliminary Design Report (PDR) Preparation: m6 will prepare a Preliminary Design Report (PDR) based on the approved scope of work, which integrates staff input and direction. The PDR will summarize the findings of the site assessment, with associated scope of work, estimate of cost, and schedule for development of PS&E, bidding, award, construction and close-out. The PDR will be submitted to the District for review and

Exhibit "A"
Client Initials _____

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approval. A total of 40 hours is allocated to this Task.

Task 103. Design Plan, Specification and Estimate (PS&E) Preparation: In accordance with the approved scope delineated in the PDR, m6 will prepare plans, specifications and engineer's estimates (PS&E) to delineate the required work for contract, bid and construction of the restoration improvements. The project scope is anticipated to include the items noted in the scope reflected in the District's RFP, with specific elements and limits of work in accordance with the approved District scope of work. The project construction documents will be developed in conformance with State and Federal requirements to insure that the efforts associated with the facility fire repair and restoration reflect qualifying activities under FEMA project development and public assistance guidelines, and are eligible for reimbursement under the FEMA PA program.

The task will involve the development of plans, communication with District staff and development of final designs sufficient to allow for bidding and construction. For the purposes of plan preparation, it is assumed that as-built plans will be provided by the District in digital form, and these may serve as the basis for plan sheets necessary for the delineation of the required repairs. An estimate of 8 plan sheets and an associated effort of 180 hours of design and drafting is allocated to this portion of the Task.

m6 will develop final specifications for the project. These specifications will include special provisions, which will include requirements specific to the repair and replacement of the Digester unit and related appurtenances. It is our understanding that the District will provide the front-end ("boiler plate") specifications common to District projects. A total of 40 hours is allocated to this portion of the Task.

m6 will provide an Engineer's Opinion of Probable Cost ("Estimate") that summarizes the quantities associated with items of work identified in the project plans and specifications, together with an opinion of the probable cost related to these items of work. This estimate will be assembled in tabular format to form the basis of the bid sheet and inform the District relative to cost expectations and budget impacts in advance of release of bid. A total of 20 hours is allocated to this Task.

For the purposes of environmental assessment, it is presumed that the nature of the repair and restoration activities contemplated in the District's scope of work would represent a de-minimis level of environmental analysis, and would qualify as an exempt activity under NEPA/CEQA.

Should project conditions unknown at the time of this Proposal's preparation be encountered,

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or discoveries during the research phase of the CE documentation render conditions that require a higher level of CEQA documentation (such as a Mitigated Negative Declaration/MND), then m6 will bring such conditions to the attention of the District, and make provisions additional scope and fee as appropriate.

Bid Period Services

Task 201. Bid Period Support: m6 will provide for bid period support for the project. Such support includes reviewing RFI's and preparing responses to contractor inquiries during the bid process. A total of 8 hours is allocated to this Task.

Task 202. Attend Pre-Bid Meeting: m6 will attend the District's pre-bid meeting for the project, providing support for District staff and interpreting and answering such inquiries as may arise from meeting attendees. A total of 4 hours is allocated to the Task.

Construction Period Services

Task 301. Attend Pre-Construction Meeting: m6 will attend the District's pre-construction meeting for the project, providing support for District staff and interpreting and answering such inquiries as may arise from meeting attendees. A total of 4 hours is allocated to the Task.

Task 302. Contractor Submittal Review: m6 will review contractor submittals in conjunction with District staff, requirements and standards, and provide for a maximum of one (1) confirming review. A total of 8 hours is allocated to this Task.

Task 303. Contractor RFI Review and Response: m6 will review contractor inquiries in the form of Requests For Information (RFI's) submitted during the construction period, and provide responses accordingly. While we do not anticipate a high volume of design or specification related RFI's, we will allocate a total of 8 hours to this Task.

Task 304. Construction Inspection: m6 will provide construction period observation of the contractor's progress at appropriate milestones in the project's execution. A total of 36 hours is allocated to this Task.

Task 305. Project/Construction Management: m6 will provide construction management on behalf of the District, in coordination with project inspection, documentation and related support functions. A total of 60 hours is allocated to this Task.

Exhibit "A"
Client Initials _____

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Project 2: Westlake Filter Plant

Task 101. Site Assessment and Scope of Work Development: m6 will perform a detailed review of the facility, and assess damages to architectural, structural, electrical, mechanical and plumbing components of the building, as well as exterior landscape, irrigation and other site components. Based on the detailed site assessment, m6 will develop a scope of work necessary to restore damaged components of the building and site to their pre-disaster condition. Scope development will be coordinated with District staff, and m6 will facilitate a scoping meeting to present findings, identify repair options, and receive feedback from staff. A total of 20 hours is allocated to this Task.

Task 102. Preliminary Design Report (PDR) Preparation: m6 will prepare a Preliminary Design Report (PDR) based on the approved scope of work, which integrates staff input and direction. The PDR will summarize the findings of the site assessment, with associated scope of work, estimate of cost, and schedule for development of PS&E, bidding, award, construction and close-out. The PDR will be submitted to the District for review and approval. A total of 40 hours is allocated to this Task.

Task 103. Design Plan, Specification and Estimate (PS&E) Preparation: In accordance with the approved scope delineated in the PDR, m6 will prepare plans, specifications and engineer's estimates (PS&E) to delineate the required work for contract, bid and construction of the restoration improvements. The project scope is anticipated to include the items noted in the scope reflected in the District's RFP, with specific elements and limits of work in accordance with the approved District scope of work.

The task will involve the development of plans, details, and structural calculations to detail the required repairs, as well as communication and coordination with District staff, to develop final designs sufficient to allow for bidding and construction. For the purposes of plan preparation, it is assumed that as-built plans will be provided by the District in digital form, and these may serve as the basis for plan sheets necessary for the delineation of the required repairs. An estimate of 12 plan sheets and an associated effort of 240 hours of design and drafting is allocated to this portion of the Task.

m6 will develop final specifications for the project. These specifications will include special provisions, which will include requirements specific to the repair and replacement of the Digester unit and related appurtenances. It is our understanding that the District will provide the front-end ("boiler plate") specifications common to District projects. A total of 40 hours is allocated to this portion of the Task.

Exhibit "A"
Client Initials _____

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m6 will provide an Engineer's Opinion of Probable Cost ("Estimate") that summarizes the quantities associated with items of work identified in the project plans and specifications, together with an opinion of the probable cost related to these items of work. This estimate will be assembled in tabular format to form the basis of the bid sheet and inform the District relative to cost expectations and budget impacts in advance of release of bid. A total of 20 hours is allocated to this Task.

For the purposes of environmental assessment, it is presumed that the nature of the repair and restoration activities contemplated in the District's scope of work would represent a de-minimis level of environmental analysis, and would qualify as an exempt activity under NEPA/CEQA.

Task 104. Meeting Attendance/City/County Submittal: m6 will attend meetings and provide for consultation with the City of Westlake Village, and submittal of repair plans to the County of Los Angeles Building and Safety, for review and approval. A total of 24 hours is allocated to this Task.

Bid Period Services

Task 201. Bid Period Support: m6 will provide for bid period support for the project. Such support includes reviewing RFI's and preparing responses to contractor inquiries during the bid process. A total of 8 hours is allocated to this Task.

Task 202. Attend Pre-Bid Meeting: m6 will attend the District's pre-bid meeting for the project, providing support for District staff and interpreting and answering such inquiries as may arise from meeting attendees. A total of 4 hours is allocated to the Task.

Construction Period Services

Task 301. Attend Pre-Construction Meeting: m6 will attend the District's pre-construction meeting for the project, providing support for District staff and interpreting and answering such inquiries as may arise from meeting attendees. A total of 4 hours is allocated to the Task.

Task 302. Contractor Submittal Review: m6 will review contractor submittals in conjunction with District staff, requirements and standards, and provide for a maximum of one (1) confirming review. A total of 8 hours is allocated to this Task.

Task 303. Contractor RFI Review and Response: m6 will review contractor inquiries in

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the form of Requests For Information (RFI's) submitted during the construction period, and provide responses accordingly. While we do not anticipate a high volume of design or specification related RFI's, we will allocate a total of 8 hours to this Task.

Task 304. Construction Inspection: m6 will provide construction period observation of the contractor's progress at appropriate milestones in the project's execution. This Task includes the provision of 6 hours for Structural Observation and related reporting, which may be required by the City of Westlake/County of Los Angeles for structural design components. A total of 36 hours is allocated to this Task.

Task 305. Project/Construction Management: m6 will provide construction management on behalf of the District, in coordination with project inspection, documentation and related support functions. A total of 60 hours is allocated to this Task.

Landscape Design and Construction Period Services

Task 401. Landscape Design: L. Newman Design Group, Inc. will provide requisite field work, construction documentation (irrigation and slope stabilization), estimates, meeting attendance and construction support, consistent with the allowances provided in their proposal, which is included in Exhibit C.

Excluded from this scope are the following:

1. Payment of any City/County fees (plan check, permit, planning, etc);
2. Survey;
3. Non-destructive investigations;
4. Construction period special inspections;
5. Soils/geotechnical studies;
6. Easement (plats, legals) and rights of entry;
7. Radius maps, notifications and mailing lists;
8. Other items not specifically provided for in the Tasks above.

It is our understanding that the District will provide their front end "boiler plate" specifications.

A reimbursable budget has been established for this project, to allow for mileage, reproduction, and other incidental items.

Enclosed we have provided our proposed Scope of Services, Exhibit "A", and Compensation, Exhibit "B". Per the District's request, we have included a copy of our insurance documentation

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805 379 1015 Phone

as well, following Exhibit "B".

Should you have any questions or comments, please feel free to call me at (805) 379-1015.

Sincerely,

m6 Consulting, Inc.

Robert Woodward, PE
Principal

Exhibit “A”
Client Initials _____

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EXHIBIT "B"
COMPENSATION
Proposal for Woolsey Fire Facility Repairs
Site Assessment, Design, Construction Management and Inspection Services

Client agrees to compensate Consultant for such services as follows:

On a Not-To-Exceed/Hourly Basis, the Tasks outlined in Exhibit "A" above. For services provided, staff will be billed based on their functional classification and corresponding hourly rate.

Project 1: Rancho Las Virgenes Composting Facility

TASK	DESCRIPTION	FEE
101	**Site Assessment and Scope of Work Development**	$3,125
102	**Preliminary Design Report (PDR) Preparation**	$4,650
103	**Design Plan, Specification and Estimate (PS&E) Preparation**	$23,850
201	**Bid Period Support**	$1,220
202	**Attend Pre-Bid Meeting**	$640
301	**Attend Pre-Construction Meeting**	$640
302	**Contractor Submittal Review**	$1,220
303	**Contractor RFI Review and Response**	$1,220
304	**Construction Inspection**	$2,850
305	**Project/Construction Management**	$7,540
	Project 1 Fee:	**$46,955.00**

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805 379 1015 Phone

Project 2: Westlake Filter Plant

TASK	DESCRIPTION	FEE
101	**Site Assessment and Scope of Work Development**	$3,125
102	**Preliminary Design Report (PDR) Preparation**	$4,650
103	**Design Plan, Specification and Estimate (PS&E) Preparation**	$31,800
104	**Meeting Attendance, City/County Submittal**	$3,840
201	**Bid Period Support**	$1,220
202	**Attend Pre-Bid Meeting**	$640
301	**Attend Pre-Construction Meeting**	$640
302	**Contractor Submittal Review**	$1,220
303	**Contractor RFI Review and Response**	$1,220
304	**Construction Inspection/Structural Observation**	$3,810
305	**Project/Construction Management**	$7,540
401	**Landscape Design and Construction Period Services**	$11,920.00
	Project 2 Fee:	**$71,625.00**
	Reimbursable Allowance (LNDG/m6-Projects 1 and 2)	**$2,800.00**
	Total Fee (Projects 1 and 2)	**$121,380.00**

Exhibit "B"
Client Initials _____

EXHIBIT C: PROPOSED HOURS AND FEE SCHEDULE

Project: LVMWD Woolsey Fire Repairs - Project 1 - Rancho Las Virgenes Composting Facility
Prepared By: Bob Woodward
Date: March 1, 2019

							m6											
	Position						**Project Manager**	**Project Eng I**	**Design Eng.**	**Designer I**	**Designer II**	**Insp. II**	**SME**	**Admin. Clerical**	**Grant Support**		**Total Hours**	**Total Fee**
	Rate						**$160**	**$145**	**$120**	**$110**	**$115**	**$95**	**$120**	**$60**	**$100**			($)
Task 101	**Site Assessment and Scope of Work Development**						15	5	0								20	$3,125
Task 102	**Preliminary Design Report (PDR) Preparation**						20	10									30	$4,650
Task 103	**Design Plan, Specification and Estimate (PS&E) Preparation**						30	60			90						180	$23,850
Task 201	**Bid Period Support**						4	4									8	$1,220
Task 202	**Attend Pre-Bid Meeting**						4	0									4	$640
Task 301	**Attend Pre-Construction Meeting**						4	0									4	$640
Task 302	**Contractor Submittal Review**						4	4									8	$1,220
Task 303	**Contractor RFI Review and Response**						4	4									8	$1,220
Task 304	**Construction Inspection**						0	0				30					30	$2,850
Task 305	**Project/Construction Management**						16	4	0				20		20		60	$7,540
	Sub Total Hours						101	91	0	0	90	30	20	0	20	0	**352**	
	Total						$16,160	$13,195	$0	$0	$10,350	$2,850	$2,400	$0	$2,000	$0		**$46,955**

Note:

EXHIBIT C: PROPOSED HOURS AND FEE SCHEDULE

Project: LVMWD Woolsey Fire Repairs - Project 2 - Westlake Filter Plant
Prepared By: Bob Woodward
Date: March 1, 2019

							m6											
	Position						**Project Manager**	**Project Eng I**	**Design Eng.**	**Designer I**	**Designer II**	**Insp. II**	**SME**	**Admin. Clerical**	**Grant Support**		**Total Hours**	**Total Fee**
	Rate						**$160**	**$145**	**$120**	**$110**	**$115**	**$95**	**$120**	**$60**	**$100**			($)
Task 101	**Site Assessment and Scope of Work Development**						15	5	0								20	$3,125
Task 102	**Preliminary Design Report (PDR) Preparation**						20	10									30	$4,650
Task 103	**Design Plan, Specification and Estimate (PS&E) Preparation**						40	80			120						240	$31,800
Task 104	**Meeting Attendance/City/County Submittal**						24	0			0						24	$3,840
Task 201	**Bid Period Support**						4	4									8	$1,220
Task 202	**Attend Pre-Bid Meeting**						4	0									4	$640
Task 301	**Attend Pre-Construction Meeting**						4	0									4	$640
Task 302	**Contractor Submittal Review**						4	4									8	$1,220
Task 303	**Contractor RFI Review and Response**						4	4									8	$1,220
Task 304	**Construction Inspection/Structural Observation**						6	0				30					36	$3,810
Task 305	**Project/Construction Management**						16	4	0				20		20		60	$7,540
	Sub Total Hours						141	111	0	0	120	30	20	0	20	0	**442**	
	Total						$22,560	$16,095	$0	$0	$13,800	$2,850	$2,400	$0	$2,000	$0		**$59,705**

Note:

L. Newman
Design Group, Inc.

FEE PROPOSAL

Date: February 27, 2019

Prepared by:
Bob Bombardier, RLA #2464
L. Newman Design Group, Inc.
31300 Via Colinas, Suite 104
Westlake Village, CA 91362

Prepared for:
M6 Consulting, Inc.
4165 E. Thousand Oaks Blvd. Suite 355
Westlake Village, Ca 91362

Subject: LVMWD – Woosley Fire Damage RFP
Project #2 – Westlake Filter Plant
Los Angeles County Waterworks District No. 29, Malibu

Dear Mr. Woodward,

Thank you for the opportunity to assist in the LVMWD project Request for Proposal.

The following is our fee proposal for the Preliminary field summary report (related to irrigation and landscape - limited to fire damaged areas) administration, meetings, slope stabilization and irrigation renovation design, and field assistance review for the Westlake Filter Plant to re-establish conditions prior to the fire. This does not include any additional screening of trees from the Three Springs neighborhood.

You had also requested that our firm provide services for Project 1. The Rancho Las Virgenes Composting facility, however landscape is excluded from project 1 tasks and is included under project 3, of which M6 Consulting is not submitting a proposal for. Our firm will propose on Project 3 items under a separate proposal as the Prime.

SCOPE OF WORK

Task 'A' – Field Work

The Sub-Consultant shall provide Landscape Architectural services for the above mentioned project. The Sub-Consultant shall visit the site in order to prepare a Preliminary report of the fire damage. The Sub-Consultant shall take photographs, and take notes in order to renovate any affected irrigation systems.

Task 'B' – Construction Document Phase (Irrigation renovation and slope stabilization design)

The Sub-Consultant shall provide support to provide landscape construction documents on provided engineer/city base templates and provide submittal drawings (including booklet form specifications for the related landscape and irrigation sections) in electronic format for the engineer to submit to the city agencies. The drawings will be drawn to plot at an appropriate scale to fit on 24" x 36" standard sheet format. The drawings will include landscaping and irrigation as well as applicable installation details. The irrigation design

shall only consider renovation for the irrigation system to re-establish the affected plant material replacement prior to the fire damage. The design will assume the balance of the existing systems are in working order.

Task 'C' – Estimate/Administration

The Sub-Consultant shall assist in estimated quantities and administration for landscape items for FEMA/CELOS and insurance documents.

Task 'D' – Meetings and Administration

The Sub-Consultant shall provide time to meet with M6 and KVMWD staff to present findings to complete documents for the tank site and to achieve "replace in kind."

Task 'E' – Bid Processing, RFI, and Construction Phase Services (Observation)

The Sub-Consultant shall provide assistance during the bid processing, answer RFI questions, and provide field observations for the tank site and in order to achieve "replace in kind" after new pipeline replacement.

Our fees, to be billed hourly, (per our current office rates)are as follows:

1. Task 'A' 5 hrs @ $160.00/hr.....ALLOWANCE..... $800.00
2. Task 'B' Flat Fee .....ALLOWANCE..... $7,600.00
3. Task 'C' 6 hrs @ $160.00/hr.....ALLOWANCE..... $ 960.00
4. Task 'D' 4 hrs @ $160.00/hr.....ALLOWANCE..... $ 640.00
5. Task 'E' 12 hrs @160.00/hr.....ALLOWANCE..... $ 1,920.00

Subtotal.....$11,920.00
Reimbursable Allowance..... .....$300.00

TOTAL..... ..**$12,220.00**

Exclusions: Items outside Irrigation and Landscape, Agronomy report, irrigation pump design, preliminary exhibits, actual submittal of drawings to agencies, and final as-builts.

Reimbursable costs noted above shall be billed at cost plus 10%.

If you have any questions, please contact our office.

Sincerely,

L. Newman Design Group, Inc.
ASLA California State License #2464

Robert Bombardier
President

RB:st

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 1/4/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Risk Strategies Company 2040 Main Street, Suite 450 Irvine, CA 92614 www.risk-strategies.com CA DOI License No. 0F06675	**CONTACT NAME:** Risk Strategies Company **PHONE (A/C, No, Ext):** 949-242-9240 **FAX (A/C, No):** **E-MAIL ADDRESS:** syoung@risk-strategies.com
INSURED m6 Consulting, Inc. 4165 Thousand Oaks Blvd., Ste 355 Westlake Village CA 91362	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** **INSURER A :** Massachusetts Bay Insurance Co. — 22306 **INSURER B :** Hanover American Insurance Co. — 36064 **INSURER C :** Arch Insurance Company — 11150 **INSURER D :** Allmerica Financial Benefit Insurance Co — 41840 **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 46378593 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	✓ **COMMERCIAL GENERAL LIABILITY** ☐ CLAIMS-MADE ✓ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ✓ PRO-JECT ☐ LOC ☐ OTHER:			OD3A251052	3/14/2018	3/14/2019	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG 	$ $2,000,000 $ $1,000,000 $ $5,000 $ $2,000,000 $ $4,000,000 $ $4,000,000 $
D	**AUTOMOBILE LIABILITY** ✓ ANY AUTO ☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS ✓ HIRED AUTOS ONLY ✓ NON-OWNED AUTOS ONLY			AW3D678957	1/1/2019	1/1/2020	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) 	$ $1,000,000 $ $ $ $
	☐ **UMBRELLA LIAB** ☐ OCCUR ☐ **EXCESS LIAB** ☐ CLAIMS-MADE ☐ DED ☐ RETENTION $						EACH OCCURRENCE AGGREGATE 	$ $ $
B	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** Y / N ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? ☐ **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		WZ3A270713	4/8/2018	4/8/2019	✓ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ $1,000,000 $ $1,000,000 $ $1,000,000
C	Professional Liability			PAAEP0023601	3/15/2018	3/15/2019	Per Claim: $1,000,000 Aggregate: $2,000,000	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

This certificate issued to provide Evidence of Insurance only.

CERTIFICATE HOLDER

*Evidence of Insurance

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Michael Christian

Attachment 2

Resumes

Robert Woodward, PE, MS, CBO, CASp

Principal Manager

EDUCATION

- ✓ MS, Structural Engineering,
- ✓ California State University at Northridge
- ✓ BS, Physics, University of Texas at Austin

REGISTRATION

- ✓ PE, State of California
- ✓ Certified Access Specialist (CASp)
- ✓ Certified Building Official (CBO)

ASSOCIATION

- ✓ American Society of Civil Engineers
- ✓ International Code Council
- ✓ American Society of Plumbing Engineers
- ✓ National Fire Protection Association
- ✓ American Public Works Association
- ✓ AASHTO

KNOWLEDGE/SKILLS

- ✓ CBC/CRC Code Application and Compliance
- ✓ Structural Design and Review
- ✓ ASCE 7 and Related Structural Design Provisions
- ✓ Design of Bridges, Roadways, and Related Infrastructure
- ✓ AASHTO and FHWA Structural and Geometric Design Standards
- ✓ FEMA Regulations and Disaster Management

Mr. Woodward is a co-founding principal with more than 20 years of experience in design, construction, inspection, plan review and project management. His background reflects a blend of both public and private sector experience, including land development, grading, drainage, roadway, bridge and structure design. He has served local agencies as a development reviewer, building official, and city engineer. His background reflects a blend of both public and private sector experience, which provides for a balanced approach to project review and design engineering goals.

Mr. Woodward as principal engineer for m6 Consulting Inc. has served his public sector clients in the capacities of municipal engineering, development review, and project management. He supervises life safety, structural, disabled access, grading, drainage and infrastructure reviews for client cities and the CSU system. He regularly assists his client cities with the design and project execution of their internal projects, most recently the Calabasas Civic Center, Lost Hills/US 101 Interchange, Lindero Canyon/US 101 Interchange and the Westlake Village Community Park.

PUBLIC SECTOR CONSULTATION

- Supervising plan check engineer for code compliance review of California State University system- wide projects.
- Supervising plan check engineer for Office of the State Fire Marshal and related projects.
- Interim City Engineer/Public Works Director functions for the cities of Westlake Village, Goleta, and Calabasas.
- Capital Projects Engineer, Cities of Goleta, Ventura, Camarillo, Thousand Oaks, Westlake Village and Big Bear Lake.
- Policy and procedure development and staff training in land development review, capital project design, infrastructure engineering.
- Capital project and program management for municipal clients.
- Provides grading, drainage, entitlement review and development conditioning for municipal clients.
- Hydrology/Hydraulic and Floodplain Management consultation.
- Management of multi-discipline teams of consultants performing environmental, civil/structural engineering and architectural designs.
- Structural design, Caltrans permitting and project management for the US 101/Lindero Canyon (Overcrossing) in the City of Westlake Village.
- Civil, structural design and project management of Agoura Road widening and bridge construction.
- Project management and design for development of 15 acre community park site including baseball, soccer fields and 60, 000 sq/ft Westlake Village YMCA facility.

Masoud Mahmoud, PE, MS, MBA, LEED AP

Principal Engineer/Project Director

EDUCATION

- ✓ MBA, Pepperdine University
- ✓ MS, Structural Engineering, Cal State University, Northridge
- ✓ BS, Civil Engineering, University of Southern California

REGISTRATION

- ✓ PE, State of California
- ✓ Certified Building Plan Examiner, International Conference of Building Officials
- ✓ LEED Accredited Professional, Green Building Institute

ASSOCIATION

- ✓ American Society of Civil Engineers
- ✓ International Code Council
- ✓ American Society of Plumbing Engineers
- ✓ National Fire Protection Association
- ✓ American Public Works Association
- ✓ Construction Management Association of America
- ✓ Project Management Institute

KNOWLEDGE/SKILLS

- ✓ Code Analysis and Interpretation
- ✓ CBC/CRC Code Application and Compliance
- ✓ Certified Building Plan Examiner
- ✓ Multi-Jurisdictional Authority Coordination and Negotiation
- ✓ Entitlement, Design, Project and Construction Management
- ✓ Multi-Discipline Consultant Coordination
- ✓ Negotiations and Dispute Resolution

Mr. Mahmoud is the founding co-principal with more than 25 years of experience in plan review, construction management, project management, entitlement management and engineering of capital construction projects with extensive and varied experience in higher education and government organizations.

While at Pepperdine University as the Associate Vice President for six years, he oversaw the 830-acre Malibu campus of which 290-acres are developed with over 1.3 million square feet of facilities. He was responsible for the management of $200 million of capital projects including master planning, design and construction. The University's "Campus Life Projects" was developed and led by Mr. Mahmoud including approximately $450 million of capital improvements encompassing 9 projects adding 1.2 million square feet of new facilities.

As a civil engineer with the Los Angeles County Department of Public Works for twelve years of progressive experience, Mr. Mahmoud held positions in the Building and Safety, Design, Water Works & Sewer Maintenance, Traffic & Lighting and Program Development Divisions. In a managerial position with the Building and Safety Division, he supervised, inspected and processed plan checks, trained and supervised plan check engineers, initiated educational programs that included code interpretations guidelines, and maintained relationships with other agencies and divisions.

PUBLIC SECTOR CONSULTATION

- Supervising plan check engineer for structural & life safety, grading & drainage for the cities of Calabasas, West Hollywood and Hermosa Beach.
- Supervising plan check engineer for code compliance review of the California State University system- wide projects in advance of submittal to the State Fire Marshal and Department of State Architect.
- City engineering, development review and project management services for the cities of Calabasas, Hermosa Beach and Goleta.
- Municipal engineering for Las Virgenes Municipal Water District.
- Capital project engineer for cities of Goleta and Hermosa Beach.
- Regulatory compliance & evaluation, plan check, analysis and accurate interpretation of Federal, State, and Local codes.
- Strong understanding of engineering, architectural, structural, mechanical, electrical and construction related disciplines.
- Governmental rules, regulations and knowledge of inner workings of the various agencies.
- Excellent understanding of the complex responsibilities for horizontal and vertical infrastructure design, management, construction, operations, and maintenance.
- Strategic project consulting, entitlement, program, design, project, construction management and owner's representation for higher education, institutional and governmental projects.
- Visionary leadership in planning, development, design, construction and budgeting of capital and renovation projects.
- Leadership in setting strategic priorities, goals and objectives, to effectively support capital design and construction activities.

Edward Alexanians, PE, SE

Senior Structural Engineer

Mr. Alexanians has more than 41 years of experience in civil and structural engineering design for both horizontal and vertical projects. His background reflects a blend of both public and private sector experience, which provides for a balanced approach to project review and design engineering goals.

Mr. Alexanians has held progressive position with Los Angeles County, Department of Public Works for 27 years. He has served the public sector in the capacities of District Engineer, Senior Civil Engineer and Head of Building Plan Check section. As the Senior Plan Check Engineer, he was responsible for supervising and training of plan check staff, inspectors, permit technicians, interpreting building code requirements and reviewing complex structures on high visibility projects.

EDUCATION

- ✓ Bachelor's Degree, Civil Eng. Tehran University, Iran
- ✓ Master's Degree, Civil Eng. Tehran University, Iran
- ✓ Master's Degree, Structural Eng. University of California at Los Angeles (UCLA)

REGISTRATION

- ✓ SE, State of California
- ✓ PE, State of California
- ✓ Licesned Contractor, CA

ASSOCIATION

- ✓ State of California Structural Licensing Exam Grader
- ✓ American Society of Civil Engineers
- ✓ International Code Council

KNOWLEDGE/SKILLS

- ✓ Plan Checking of Complex Structures and Interpretation of Building Code
- ✓ Supervision and Training of Plan Check, Inspection and Permit Staff
- ✓ Knowledge and Implementation of Most Structural Programs.
- ✓ Principal Designer of Bridges and, Sewer Treatment Facilities
- ✓ Structural Design of Hospitals, Rehabilitation Center and Government Office Buildings
- ✓ Design of Department Stores, Shopping Centers and Residential Custom Homes

PUBLIC SECTOR CONSULTATION

- Reviewed high-rise and mid-rise buildings, amusement rides at the Universal and Six-Flags Magic Mountain.
- Reviewed a five-story hotel, conversion of a three-story hotel into condominiums, multi-unit apartment, multi-story mixed use occupancy building and five story-story post tension concrete open parking structure.
- Reviewed residential, commercial, industrial, wood, steel, concrete, reinforced and unreinforced masonry buildings for the Los Angeles County Building Code compliance.
- Supervised plan checking, permitting and inspection services for the South Whittier office and contract cities of La Mirada and Santa Fe Springs.
- Interpreted Building Code requirements to applicants and staff.
- Provided mediation and conflict resolution between applicants and plan check engineers.
- Responded to Board of Supervisors' inquiries about the area's issues.
- Trained plan check staff and provided guidance on their projects. Balanced plan check workload among all County District offices.
- Damage assessment and retrofit design for numerous condominiums, warehouses and single family dwellings after the 1994 Earthquake.
- Structural design of several hotels with concrete podium and four story wood framing, single family dwellings and residential additions.
- Design of reinforced concrete, pre-stress and post-tensioned I beams, box girder and steel railroad bridges, traffic signal poles, retaining walls, vaults, box culverts, water reservoirs, formworks for bridge structures and shear pins for landslide stability.
- Design of masonry department stores with wood panelized roofing and masonry walls, shopping centers, and residential custom homes.
- Structural design of a reinforced concrete 100 - bed rehabilitation center, modification of government buildings, design of steel frame residential buildings and the structural design of a 400 - bed regional hospital.
- Design refinery platforms, pipe supports, sea water inter-tank skid, horizontal and vertical pressure vessels and their foundations. Plan checked vendor's shop drawings and material take-off.
- Principal designer of two 150 - bed and one 600 - bed reinforced concrete hospitals. A team member on the structural design of a steel hangar (250 feet span). Design of sewage treatment units and several residential buildings including a 12-story steel frame hotel.

Jimmy Todorov, PE

Civil Engineer

EDUCATION

- ✓ BS, Civil Engineering, University of Civil Engineering and Architecture, Sofia, Bulgaria

REGISTRATION

- ✓ PE, State of California
- ✓ PE, Bulgaria

ASSOCIATION

- ✓ American Society of Civil Engineers

PROJECT EXPERIENCE

- ✓ Highways and Roadways
- ✓ Interchange Connectors
- ✓ Street Improvements
- ✓ Water and Sewer
- ✓ Grading and Drainage
- ✓ Parking Lots
- ✓ Bike Paths
- ✓ Metro Transit Rail
- ✓ Tunnels

KNOWLEDGE/SKILLS

- ✓ Civil Design and review
- ✓ Design of Bridges, Roadways and Related Infrastructure
- ✓ Design of Mass Transit Projects
- ✓ Capital Project Coordination
- ✓ Project Management
- ✓ Project Administration

COMPUTER SKILLS

- ✓ Inroads 8.03
- ✓ Storm Works
- ✓ Auto Cad
- ✓ Civil 3D
- ✓ Flow Master
- ✓ Enercalc
- ✓ RISA

Mr. Todorov has 25 years of experience in the design of a wide range civil engineering projects. He is a pragmatic and highly adaptable Civil Engineer with extensive expertise in the design and review of grading, drainage and civil infrastructure improvements, as well as mass transit civil works, working intently on various Los Angeles Metro projects throughout his career. He has played a pivotal role in several projects, namely the Expo II, Eastside (LRT), Orange, Red, Blue and Green Lines as well as other mass transit projects in United States and Internationally.

Mr. Todorov's positive attitude, exceptional attention to detail and ability to work to clear well documented parameters demonstrates consistent levels of excellence in difficult and time-conscious sensitive projects. He is dedicated, motivated and continually striving to maintain and develop new skills, and take on new challenges.

Design Accomplishments

- Designed and prepared drawings for rehabilitation of seven major and residential streets in City of Costa Mesa.
- Responsible for design of various residential and commercial land developments, grading, drainage, parking lots, access roadways, driveways, street improvements, water, sewer and storm drain in City of Calabasas.
- Designed interchange, horizontal alignment, vertical profile, grading, drainage for three miles of four lanes highway and prepared cost estimates in City of Bakersfield.
- Designed exit ramp widening and cost estimates for alternatives for Avenue K Exit Ramp Widening Study in City of Santa Clarita.
- Designed two options for 12 miles of highway and interchange connectors to existing SR-91 and SR-15 in the City of Corona.
- Designed horizontal alignment and profile for 1.2 mile bike path along the flood control channel for the City of La Habra.
- Designed and produced contract drawings for final design of the kiss-and-ride parking lots and bike paths at Sepulveda Boulevard, Van Nays Boulevard and Woodley Avenue for the Los Angeles Metro Orange Line in City of Los Angeles.
- Designed and produced contract drawings for Wilshire Bus Rapid Transit System and assisted contractor for final design of horizontal alignment and profile for 13 mile bike path and resolved grading and drainage issues along the alignment for San Fernando Valley Bus Rapid Transit System.
- Designed track alignment for two miles of tunnels for Regional Connector Advanced Study and 10 miles of tunnels for Metro Westside Extension Transit Corridor Study in the City of Los Angeles.
- Designed and produced contract drawings for preliminary and final design of horizontal and vertical alignments for the Los Angeles Metro Red Line and assisted in preparation of construction documents for the Los Angeles Metro Green Line.
- Designed and produced contract drawings, including track alignment design for the yard and yard leads for Central Phoenix LRT.
- Designed track alignment for 20 miles of elevated guideway for Honolulu High-Capacity Transit Corridors Project in Hawaii.
- Designed of six miles track alignment for Exposition Transit Project (Phase III).
- Designed at-grade segments and intersection crossing of Alameda Street and First Street, as well as for six traction power supply substations for Eastside Light Rail Transit Extension in City of Los Angeles.
- Responsible for design and coordination of 50 km track alignment for the Riyadh Metro Project in Saudi Arabia.
- Designed track alignment for 2.1 km Tram System in Downtown Doha in Qatar

Kaveh Razavi, PE

Mechanical Engineer

EDUCATION

- ✓ MS, Mechanical Engineering
  University of Southern California
- ✓ BS, Mechanical Engineering
  Tehran Polytechnic University, Iran

REGISTRATION

- ✓ PE, Mechanical, State of California

ASSOCIATION

- ✓ American Society of Mechanical Engineers
- ✓ American Society of Heating, Refrigerating, and Air Conditioning Engineers
- ✓ International Association of Plumbing and Mechanical Officials

KNOWLEDGE/SKILLS

- ✓ Plan Checking of Complex Facilities and Interpretation of Codes
- ✓ Mechanical Design, Review and Approval Processes
- ✓ Title-24 Energy Standards
- ✓ Uniform Mechanical and Plumbing Codes Design Standards
- ✓ Supervision and Training of Plan check, Inspection and Permit Staff
- ✓ State Energy Standards Mechanical and Plumbing Codes Trainers.
- ✓ Energy Systems Planning and Development

Mr. Razavi has more than 30 years of experience in review and design of Mechanical and Plumbing Systems for both public and private sector. He reviews plans, design calculations, and specifications for public and private construction of commercial, residential and industrial facilities and makes inspections to insure conformity with California Title 24 Energy Standards and California Mechanical and Plumbing Codes.

Mr. Razavi prepares design and calculations for HVAC systems including load estimation, air distribution systems, equipment sizing and selection, and project specifications. He also prepares design for plumbing systems inclusive of water, gas, and sewer for commercial, industrial, and residential buildings.

Mr. Razavi's blend of public and private sector experience in design and review provides our clients with a valuable resource in Mechanical and Plumbing systems review capabilities.

PUBLIC SECTOR CONSULTATION

- Supervision of plan check engineers, inspectors and permit technician.
- Reviewer of Complex buildings and high profile projects.
- Senior Mechanical Engineer and Chief Mechanical Inspector.
- Trainers of plan check engineers, inspectors and permit technicians.
- Coordination of all phases of building plan check process with developers needs in order to facilitate construction within applicable laws and standards.
- Review of complex industrial and retail projects with mixed use occupancy.
- Provide guidance and technical assistance to the public on engineering aspects of building laws and construction.
- Training on the State Energy Standards to inspectors personnel and newly hired engineers with all aspects of State Energy Standards and Uniform Mechanical and Plumbing Codes.
- Participation in the development of new product mechanisms and predicting failure modes.
- Computation, compilation and preparation of engineering reports, estimates, design specifications, and plans for engineering projects.

Nader Shams, PE

Electrical Engineer

EDUCATION

- ✓ BS, Electrical Engineering California State University, Los Angeles

REGISTRATION

- ✓ PE-Electrical, State of California

ASSOCIATION

- ✓ International Association of Electrical Inspectors
- ✓ I.A.E.I. Former President

KNOWLEDGE/SKILLS

- ✓ Senior Electrical Engineer and Chief Electrical Inspector
- ✓ Code Analysis and Interpretation
- ✓ Electrical Plan Examiner for Retail, Commercial, Residential and Refinery Projects for Various Cities in Los Angeles and Orange County
- ✓ Reviewer of Complex and High Profile Buildings
- ✓ Supervision and Training of Plan check, Inspection and Permit Staff
- ✓ Electrical Design and Engineering
- ✓ Electrical Codes and Title 24
- ✓ Trainer for the National Electrical Codes and Title 24 Energy Compliance
- ✓ Electrical Engineering Design for Residential, Commercial, Retail and Industrial Projects

Mr. Nader Shams has more than 32 years of experience in review, design and construction oversight of electrical systems.

Mr. Shams worked for the Los Angeles County, Department of Public Works, Building and Safety Division for 25 years. He was the Senior Electrical Engineer and Chief Electrical Inspector for 8 years. In this role, he served his public sector clients as head of Electrical Plan Check section, plan checking, interpreting building code requirements and supervising plan check engineers, inspection services, and permit technicians for the LA County and affiliated Cities. As the Senior Electrical Engineer and Chief Electrical Inspector, he was responsible for training the plan check and inspection staff county wide and review of complex buildings and high profile projects.

Mr. Shams also designs and prepares calculations for building electrical distribution systems and utilization equipment. He has been responsible for the design, management, value engineering, and quality control of multiple projects in the fields of retail, industrial, commercial and residential.

Mr. Shams blend of public and private sector experience in design and review provides our clients a valuable resource for value engineering, incremental review and field inspection of complex electrical installations.

BUILDING AND SAFETY AND DESIGN ACCOMPLISHMENTS

- Supervised plan checking, permitting and inspection services for Los Angeles County and affiliated cities.
- Reviewed Disney Concert Hall, LAC+USC Medical Center replacement facility and Universal Studio.
- Reviewed numerous essential buildings such as police and fire stations serving the communities in the Southern California.
- Provided training for National Electrical Code and Title 24 Energy Compliance to plan checkers, inspectors and permit technicians County wide.
- Conducted educational programs for new changes in the National Electrical Codes and Title 24 to local electrical consultants in Los Angles.
- Served both public and private organizations, in the design and review of electrical systems. Most commonly in the fields of industrial, retail, commercial, single and multi-family dwelling units.
- Provide consultant services for electrical design and engineering.

Nicole Thompson, MS, CPE, EIT

Building Design/Disaster Recovery/FEMA Coordinator

EDUCATION

- ✓ Master of Science, Structural Engineering, California State University at Northridge
- ✓ Bachelor of Science, Civil Engineering, California State University at Northridge

CERTIFICATION

- ✓ Certified Building Plans Examiner
- ✓ NCEES Licensed Engineer in Training

ASSOCIATION

- ✓ International Code Council
- ✓ American Society of Civil Engineers
- ✓ American Public Works Association
- ✓ American Society of Plumbing Engineers
- ✓ AASHTO

KNOWLEDGE/SKILLS

- ✓ Building Plan Review
- ✓ Drainage and Grading
- ✓ Project Management
- ✓ Document Control
- ✓ Communication Skills
- ✓ Administration
- ✓ Graphic Design

COMPUTER SKILLS

- ✓ Enercalc
- ✓ Cost Works
- ✓ Primavera
- ✓ AutoCAD
- ✓ RISA
- ✓ RAM Structure
- ✓ Microsoft Project

Ms. Thompson performs building design, plan review for residential, commercial and industrial projects for code compliance. She provides plan review for State-owned buildings and facilities for the Office of the State Fire Marshal (OSFM) for compliance with Title 24, Title 19 and NFPA Standards. She provides review of grading, drainage, shoring and off-site infrastructure for site development and public works projects. She supports municipal clients with State and federal disaster assistance, providing coordination of grant funding and project specific applications.

Ms. Thompson has completed multiple FEMA/CAL OES funding applications and associated efforts for the Cities of Goleta, West Hollywood, and Oxnard. She is familiar with FEMA policies and procedures, as well as financial project modeling and cost/benefit analysis methodology.

Ms. Thompson is a graduate from the Civil Engineering and Construction Management Program at California State University Northridge. She is currently pursuing a master of science in structural engineering degree.

PUBLIC SECTOR CONSULTATION

- Plan review for grading, drainage, shoring and infrastructure plans for the City of Hermosa Beach Department of Public Works. Examines and reviews commercial and residential building drainage, grading and low-impact development (LID). Responsible for preparing plan review check lists, updating City development review policies and procedures.
- Plans examiner for the City of Calabasas and West Hollywood Community Development Department. Examines commercial, residential and code enforcement cases for compliance with the California Building, Residential, Mechanical, Plumbing, Electrical and Energy Conservation Codes.
- Building/Oversight for Office of the State Fire Marshal (OSFM) reviews of State of California owned projects, including State colleges/universities, Board of Corrections/detention, Department of Motor Vehicle (DMV), State Parks and other buildings and facilities for life safety and NFPA standard compliance.
- Creates and revises city policy and procedure documents as well as city handouts, forms and checklists for pubic distribution.
- Project management assistant for emergency relief, disaster assistance and federal aid projects, providing coordination of funding, program applications and project-specific programming with CAL OES, FEMA and FHWA on behalf of municipal clients.
- Building architectural and structural design and detailing, field review, structural observations, RFI and submittal review and coordination.

Robert Patrick Kelly, PE

City Engineer / Senior Project Manager

Mr. Kelly has well over 40 years of professional engineering experience related to the public works sector starting with his early years as a Senior Civil Engineer Assistant for the County of Los Angeles Flood Control District and ending with his most recent professional endeavor as an Assistant Public Works Director/City Engineer for the City of Santa Barbara where he dedicated 22 years as a city employee. Prior to working with the City of Santa Barbara, Mr. Kelly has held many respected titles including Associate Civil Engineer for Boyle Engineering Corporation, Project Engineer for Willdan Associates, Assistant City Engineer for the City of Culver City, and Director of Public Works for the City of Manhattan Beach.

During the course of his career Mr. Kelly has been prestigiously recognized for his dedication and merit by multiple associations including being named "Engineer of the Year" by the American Society of Civil Engineers in 2003 and "Professional of the Year" by the American Public Works Association in 2014. Mr. Kelly's past work is comprised of a blend of private and public sector experiences.

Education

- ✓ BS, Engineering and Applied Science, University of California, Los Angeles

Registration

- ✓ PE, State of California

Memberships and Affiliations

- ✓ ASCE ,
  - Life Member
  - Engineer of the Year 2003
- ✓ APWA, Professional of the Year, 2013
  - Central Coast Chapter President, 1996
  - Professional of the Year, 2014

Training

- ✓ Emergency Management:
  - Earthquake: California Specialized Training Institute, San Luis Obispo, Ca 1994
  - Emergency Management in Public Works, APWA, La Miranda, Ca 1989
  - Emergency Management Institute (Integrated Response) Emmitsburg, MD, 1986

Presentations

- ✓ Leveraging Resources, California League of Cities, Public Works Officers Institute, Sand Diego, 1996
- ✓ Mission Impossible: Delivering More Services for Less Money, American Public Works Association, International Public Works Congress and Exposition, Washington, D.C., 1996

Discipline Experience

- ✓ Civil Design
- ✓ Design & Project Management
- ✓ Construction Management
- ✓ Program Management

Public Sector Consultation

- As the Assistant Public Works Director/City Engineer for City of Santa Barbara Led many multi-objective Capital Improvements design teams including the State Street Downtown Sidewalk Replacement Program Task Force a County Association of Government (SBCAG) "Measure" sales tax transportation with a Roundabout at a freeway interchange; the Lower Mission Creek Flood Control project though a historical urban neighborhood, and others.
- Approved Engineering drawings/plans, guaranteeing professional standards for projects totaling over $600 million including Waterfront Marina improvements, new Airport Terminal, water supply pipelines, sewer pipelines, Water/Wastewater/Reclaimed Water treatment plant improvements, tunnel repairs, new parks, buildings, bridges, storm drains and street/traffic/pedestrian improvements and pavement analysis/resurfacing.
- Oversaw completing the City's Capital Program averaging over $43 million per year and served as the Street Maintenance Division Manager.
- Managed City's Solid Waste Program and developed contingencies for possible rapid landfill closure and local Material Recycling Facility planning.
- Served as City 'Incident Commander' for recovery from "Storms of 1995" record flood damages, including innovative mapping to implement prompt and effective street debris and sediment cleanup.
- As the Director of Public Works for City of City of Manhattan Beach, provided Engineering Advise to City Manager, City Council, and Public Work's Commission. Delivered presentations to City Council and public groups regarding budget and Capital planning. Managed City's consulting traffic engineers, neighborhood traffic studies, and issues related to new development, served as City Liaison with County Transportation Commission.
- Negotiated franchise agreements with local public utilities. Monitored environmental programs and expedited resolution to environmental challenges, such as storm water discharge and underground methane gas.
- Managed planning, design and construction of City's capital improvements including pier rehabilitation, water/sewer system telemetry, Underground Utility Assessment District, police building addition, and GIS & permit tracking system.
- As the Assistant City Engineer for City of Culver City, directed and managed various levels of budgeting, planning, design, construction, inspection, and administration for a wide variety of City and Redevelopment Agency public works projects.
- As a Senior Civil Engineer Assistant for Los Angeles County Flood Control District, Supported Operation and Maintenance functions.

Victor Peterson, CBO

Project Administration/Communication

EDUCATION

- ✓ BS, Education
  Western Illinois University
- ✓ Associates Degree
  William Rainey Harper College
- ✓ Associate's Degree, Inspection Technology
  Los Angeles Trade Tech

ASSOCIATION

- ✓ National Fire Protection Association
- ✓ California Building Officials
- ✓ International Code Council
- ✓ American Association of Code Enforcement
- ✓ Statewide California Association of Code Enforcement Officials

KNOWLEDGE/SKILLS

- ✓ Code Analysis and Interpretation
- ✓ Certified Building Inspector
- ✓ Program Development
- ✓ Certified Professional Code Administrator
- ✓ Hazardous Materials Specialist
- ✓ Plan Review, Permit Processing, and Record Keeping
- ✓ Strategic Planning, Problem Solving and Team Building
- ✓ Department Leadership and Management

Mr. Victor Peterson has more than 37 years of experience in municipal planning, code enforcement, inspection, building and department development. His background spans the leadership and direction of both city planning and building and safety divisions of community development departments.

Mr. Peterson has recently completed a tenure of 22 years as Building Official and Environmental Sustainability Director for the City of Malibu. Prior to working in Malibu, Mr. Peterson served as Building Official for the County of Ventura, and well as Deputy Planning Director with the City of Camarillo. His responsibilities have included the oversight of plan review, code enforcement and building division operations in sophisticated regulatory environments, as well as the supervision of subordinate staff. He is well versed in the art of inter-departmental communication and coordination, as well as the business of tactful interaction with members of the community and design professionals alike.

Mr. Peterson's career began his career as a building inspector and code enforcement officer with the City of Redondo Beach. Over a period of 10 years he rose in the ranks of the City's building division, rising to the level of Deputy Building Official, supervising building inspection, code enforcement and permit operations and related staff. Mr. Robert Woodward has more than 20 years of experience in construction, inspection, plan review and project management. His background reflects a blend of both public and private sector experience, which provides for a balanced approach to project review and design engineering goals.

PUBLIC SECTOR CONSULTATION

- As Building Official for City of Malibu, was responsible for the transition of their contract department into an in-house department.
- As the City of Malibu's first in-house Building Official, unified both City Planning and Building & safety Departments to create an Environmental Community Development Department (ECD).
- Developed a department that focused on water quality and environmental sustainability named the Environmental Sustainability Department (ESD).
- Responsible for the ESD which included enforcement and development of construction codes.
- Created a department that enforced Green Building and Sustainable Energy, and onsite wastewater treatment systems (OWTS) codes.
- Developed management programs for solid waste, recycling, storm water management and monitoring, water re-use & conservation, and management of the City's Special Biological Significance (ASBS).
- As a building Inspector, Inspected all types of construction project types for compliance with the plans, local ordinances and the building codes.
- As a code enforcement officer, responsible for opening and managing existing municipal cases, conducting investigation and enforcement of violations and regulating public health, safety and welfare.

Daniel McLaughlin, CPE

Senior Building Inspector & Plan Examiner

EDUCATION

Fullerton Junior College:

- ✓ Construction Management and Technology

Los Angeles Trade Technology:

- ✓ Inspection Construction Technology

Carpenter Apprenticeship School:

- ✓ Certification of Journeyman

ASSOCIATION

- ✓ International Code Council

CERTIFICATION

- ✓ Certified Building Inspector
- ✓ Certified Mechanical Inspector
- ✓ Certified Plumbing Inspector
- ✓ Certified Plans Examiner Credential (CALBO)
- ✓ CA Design Professional Credential (CALBO)
- ✓ CA Building Official Credential (CALBO)
- ✓ CA Building Official (ICC)

DISCIPLINE EXPERIENCE

- ✓ Inspector of Record
- ✓ Plan Reviewer
- ✓ Quality Assurance
- ✓ Specialty Field Inspection

Mr. McLaughlin has 40 years of professional experience in construction industry and is a building code instructor at the Ventura City College. His background includes extensive public sector experience in addition to the private sector, which provides for a competent and thorough plan check and inspection process.

He has over 30 years of experience as building inspector, building official, and supervisor for governmental agencies, with duties including performing inspections and plan check for building code compliance, assisting code enforcement and planning departments, as well as supervising and training inspection staff.

PUBLIC SECTOR CONSULTATION

- As Senior Combination Building Inspector with Willdan Group, inspected and plan checked commercial, industrial, single-family and multi-family residences for California Code compliance.
- As plumbing and mechanical code instructor at Ventura City College, educates and trains students on current Plumbing and Mechanical Codes.
- As interim building manager and senior building Inspector for the City of Goleta, inspected single and multifamily dwellings, commercial and industrial projects for compliance of California building, electrical, plumbing, mechanical, Title 24 disabled access and energy codes; assisted code enforcement staff with substandard housing, illegal construction cases, and City Attorney referrals; assisted planning staff in planning conditions enforcement; plan checked residential and commercial projects for code compliance; trained public works department staff.
- As combination building inspector and plumbing & mechanical specialist with the City of San Buenaventura, inspected and plan-checked single and multifamily dwellings, commercial and industrial projects for compliance of California building, electrical, plumbing, mechanical, Title 24 disabled access and energy codes; assisted code enforcement staff; trained inspection and plan-check staff relating to plumbing, mechanical, building, energy, and disabled access codes.
- As building inspection supervisor and Acting Assistant Building Official for the City of Santa Barbara, supervised staff of combination residential and specialist inspectors; monitored daily inspection schedules, instructed training classes; performed complex building inspections; assisted code enforcement program, prepare annual budget, inspection and plan check statistics and annual reports for Inspection Division; interacted with public organizations, City Review Boards, City Council, and other various City and County agencies.

Luis Molina, EIT, CPE

Building Design

EDUCATION

- ✓ M.S. Structural Engineering, California State University at Northridge (Expected - May 2020)
- ✓ BS, Civil Engineering
  Minor in Business Management
  California State University at Northridge

CERTIFICATION

- ✓ NCEES Certified Engineer in Training
- ✓ Certified Building Plans Examiner

KNOWLEDGE/SKILLS

- ✓ Building Plan Review
- ✓ Project Management
- ✓ Drainage and Grading
- ✓ Document Control
- ✓ Communication Skills
- ✓ Administration

ASSOCIATION

- ✓ International Code Council
- ✓ American Society of Civil Engineers
- ✓ American Institute of Steel Construction
- ✓ American Public Works Association
- ✓ American Society of Plumbing Engineers
- ✓ AASHTO
- ✓ Society of Hispanic Professional Engineers

COMPUTER SKILLS

- ✓ RISA-3D
- ✓ HEC-RAS
- ✓ Enercalc
- ✓ AutoCAD
- ✓ RAM Structure
- ✓ Microsoft Project
- ✓ Microsoft Access
- ✓ Microsoft VBA

Mr. Molina services as an Associate Civil Engineer for m6 Consulting, providing structural, life-safety, grading and drainage design and review for college, university, health care, correctional and municipal projects for code compliance.

Mr. Molina is a graduate from the Civil Engineering and Construction Management Program at California State University Northridge. He is currently pursuing a master of science in structural engineering degree.

Mr. Molina enjoys seeing projects evolve from concept to completion. He was Project Manager for the Steel Bridge Competition at Cal State Northridge and helped his team earn 9th place at the National Student Steel Bridge Competition.

PUBLIC SECTOR CONSULTATION

- Design/Oversight for California State University system-wide plan review services and Marin Community College District in Marin County. Reviews drawings and specifications for completeness, accuracy, and code compliance with Division of State Architect (DSA), building, structural, mechanical, fire, electrical, plumbing, energy conservation, and disabled access codes.
- Plan Review for the City of Calabasas and West Hollywood Community Development Department. Reviews commercial, residential and code enforcement cases for compliance with the California Building, Residential, Mechanical, Plumbing, Electrical and Energy Conservation Codes.
- Develops hydraulic studies for clients in Ventura County, studies include HEC-RAS analyses of channels and associated conveyance capacity to convey the drainage volumes from tributary areas and submittal to respective authorities.
- Design/Oversight for Office of the State Fire Marshal (OSFM) reviews of State of California owned projects, including State colleges/universities, Board of Corrections/detention, Department of Motor Vehicle (DMV), State Parks and other buildings and facilities for life safety and NFPA standard compliance.
- Civil Engineering assistant for the City of Hermosa Beach Department of Public Works. Reviews, catalogs and processes commercial and residential building drainage, grading and low-impact development (LID).
- Capital projects engineering assistant for the City of Goleta. Assists with capital improvement projects such as acquisition of Southern California Edison owned street lights and bike lane project proposal and development.
- Civil Engineering assistant for the City of Calabasas in the development of Flood Hazard Prevention ordinance and implementation.
- Assists building inspectors in the field when engineering problems are encountered and advise on engineering matters.

ROBERT L. BOMBARDIER, PRESIDENT
California Licensed Landscape Architect #2464
L. Newman Design Group, Inc.
31300 Via Colinas, Suite 104
Westlake Village, CA 91362

EDUCATION

1980	Landscape Architecture, UCLA Extension – Los Angeles, CA
1978	Technical Illustrations and Architecture, Moorpark College – Moorpark, CA
1972 - 1976	Civil Engineering, Moorpark College – Ventura, CA

EXPERIENCE AND AREAS OF SPECIALIZATION

1973 - Present Mr. Bombardier has forty years of experience in the field of landscape architecture. He became a Licensed Landscape Architect in 1984 and is currently the President of the firm. Tasks include client relations, site inventory, conceptual master planning, site analysis, scheduling, production, cost estimating, large-scale projects, pool and water feature design – commercial and residential, technical hydraulics, irrigation design, landscape design, drainage, hardscape design, wetland restoration, architecture, bid specifications, construction documents, construction reviews, and site observation services.

PROJECTS

The following is a partial list of projects handled by Mr. Bombardier that are affiliated with project design, construction documents, land planning, and site observation:

Dos Vientos Ranch, Newbury Park, CA

University Village, Thousand Oaks, CA

Belmont Village, Thousand Oaks, CA

RYAN J. BRADDOCK, VICE PRESIDENT
L. Newman Design Group, Inc.
31300 Via Colinas, Suite 104
Westlake Village, CA 91362

EDUCATION

1991 - 1996 California Polytechnic State University – San Luis Obispo, CA
Bachelor of Architecture
Magna cum Laude Honors
Emphasis in Sustainable Design

EXPERIENCE

1998 - Present Mr. Braddock has fifteen years experience with the firm and is currently the Vice President. Tasks include client relations, project proposals, site inventory, conceptual land planning, site analysis, scheduling, computer management, production, cost estimating, irrigation design, landscape design, drainage, hardscape design, specifications, construction documents, and site observation services.

PROJECTS

The following is a partial list of projects handled by Mr. Braddock that are affiliated with project design, construction documents, and site observation:

Simi Valley Hospital, Simi Valley, CA

Four Seasons/Westlake Wellbeing Center, Westlake Village, CA

Giant Oak Center, Newbury Park, CA

JOHN OBLINGER, VICE PRESIDENT, HORTICULTURE
Oak Tree Consultant
Certified Arborist #WE-6820A
L. Newman Design Group, Inc.
31300 Via Colinas, Suite 104
Westlake Village, CA 91362

EXPERIENCE & EDUCATION

Mr. Oblinger entered the field of ornamental horticulture by working in landscape maintenance and installation, then in retail and wholesale nursery operations including plant propagation. He joined the firm in 1987 and is the principal investigator for residential and commercial horticultural studies that include tree assessment, project coordination, and development of landscape maintenance programs. He is an experienced AutoCAD user.

Mr. Oblinger is associated with the Conejo Valley Botanic Garden (past Board Member) and the California Native Plant Society. Mr. Oblinger holds a Bachelors degree from the University of Massachusetts and has been practicing horticulture for over thirty years.

PROJECTS

Tree Monitoring (City & Parks) - City of Westlake Village, CA

Lost Canyon Country Club Development – Simi Valley, CA

Lang Ranch Community Park – Thousand Oaks, CA

Calabasas Tennis and Swim Club – Calabasas, CA

Viewpoint School - Calabasas, CA

Woolsey Fire Facility Repairs Project 3:

LVMWD Headquarters, Reservoir No.2, Rancho & Misc Facilities

L. Newman Design Group, Inc.

- Landscape Architecture
- Planning
- Horticulture
- Biological Restoration

L. Newman
Design Group, Inc.

February 28, 2019

Mr. Eric Schlageter, Senior Engineer
Las Virgenes Munipal Water District
4232 Las Virgenes Road
Calabasas, CA 91302

RE: Woosley Fire Damage RFP
Landscape Architectural Design Services
Project #3 (LVMWD Headquarters, Reservoir no.2, Rancho Site and Misc. Facilities)

Dear Mr. Schlageter,

We are very pleased to have the opportunity to provide a proposal for the renovation design services and qualifications for the above mentioned project. We are including five (5) bound copies of our proposal and related fees as requested along with an electronic copy.

We have reviewed the RFP outline, in preparation of our proposal. We have reviewed all of the listed projects with staff on the internet, received available as-builts and reviewed photographs of the fire damage.

We are utilizing the services of Pacific Coast Civil, Inc. (PCC) as a sub consultant for the recommendations of the BMP for erosion control and any recommendations beyond the basic BPM's to address Reservoir No., 2 debris flows. PCC's principal holds a State of California Professional Engineer license.

As far as the guardrail at the Dog Park we can utilize the typical Cal Trans guardrail detail for replacement. If a structural engineer is warranted or required, we will hire a local structural engineer at no additional cost to our proposal.

We look forward to an enjoyable relationship with the Las Virgenes Municipal Water District (LVMWD) during the renovation design and implementation of the erosion control, irrigation and landscape for the subject sites, prior to the Woosley Fire damage.

Sincerely,

L. Newman Design Group, Inc.
ASLA California State License #2464

Robert Bombardier
President

RB:st

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PROJECT UNDERSTANDING AND APPROACH

It is the intention of the Las Virgenes Municipal Water District (LVMWD) to engage the Consultant to perform the described design services for Project #3 mentioned herein:

The LVMWD has requested qualifications and fee proposal for a turnkey design development process as it relates to seventeen project sites (listed under project #3 in the Woosley Fire damage RFP) It is our understanding that LVMWD is requesting professional design services to prepare a field summary report of each site renovation design development package, construction documents and FEMA / CAL-OES grant funding assistance. The proposed projects are spread out in the County of Los Angeles and parts of the City of Calabasas.
Both the civil engineer and LNDG have a good staff resource to handle multiple projects simultaneously.

Project 3: LVMWD Headquarters, Reservoir No. 2, Rancho & Misc Facilities

- Repair and replacement of the existing landscaping and irrigation piping, valves, control boxes and supporting appurtenances to establish new growth of burned areas/slopes for the following locations;

  Miscellaneous Facilities

  - Westlake Pump Station
  - Seminole Pump Station
  - Reservior 2 (recycled water Reservoir)
  - Kimberly Tank
  - Torchwood Tank
  - Indian Hills Tank
  - Ranch View Tank
  - Morrison Tank
  - Seminole Tank
  - Jed Smith 1 & 2 Tanks
  - Lower Oaks Tanks
  - Latigo Tank
  - Cordillera Tank
  - Headquarters
  - Rancho
  - Centrate Tank/Farm Control Building Site
  - Equestrian Reservoir Site

- Repair and replacement of damaged metal beam guardrail along Las Virgenes Road near the Dog Park Provide for removal of dead/damaged wood and vegetation from debris basin.
- Develop BMP improvement for erosion control including but not limited to hydroseeding, straw waddles silt fencing etc at all locations as stated above.
- Repair and replace lighting bollards and wiring. Lighting is included under Project 1 and therefore not included in our proposal.
- Make recommendations beyond basic BMP's to address potential debris flows from entering Reservoir No. 2.

SCOPE OF WORK

In Summary, Project No.3 is for evaluation, repair and replacement of the existing landscaping and irrigation piping valves, control boxes and supporting appurtenances to establish new growth of burned areas/slopes along with BMP per erosion control.

Our scope if work is as follows:

Task 1. Field Investigation – Fire damage summary Preliminary design report

We will visit each of the sites, photograph and take inventory of the damage as it relates to landscape, irritation and erosion. We will determine the damage extents and define limits of repair, so the objective will be to return the sites to the pre-fire condition. However in some cases the site may require less work than average and remaining effort would be toward another site requiring more work.

Task 2. Design Development Phase

We will provide preliminary design, define the areas along with the written scope. (hand colored overlays on top of prints).
The majority of the plans provided are PDF's, "not cad files". We will need to create new base plans utilizing the PDF's of the project site (limits). We may use GIS maps and aerial imagery within the contents of the plan preparation.

Our landscape documents will be provided on 24"x36" standard format. Drawing will be provided at a scale of 1"=20' with smaller scale overall for reference. The civil erosion protection plans will be at a scale of 1"=40'

We will provide a comprehensive scope of work repair and conduct a scoping meeting to present the recommended scope of work to the District for feedback and approval.

The Civil Engineer will provide alternatives for erosion control and protection of potential debris flows from Reservoir No. 2.

Task 3. Construction Document Phase

After approval direction by the district, we shall develop bid documents to include irrigation plans, landscape slope stabilization plans, and specification to meet all contractor requirements of FEMA/CAL-OES for grant funding and reimbursement compliance.

We will provide administration, clerical, and accounting to achieve a suitable biddable set for construction plans for bidding. We will coordinate the Design Team efforts with the district. We will provide additional refined design based upon Design Development review as part of the Construction Documents.

We will research appropriate drought tolerant slope stabilization hydroseed mixes for the specific project site.

All of our drawings will be drawn on current 2018 Auto Cad and coordinated between the consultants.

We will provide Auto Cad Construction details for all applicable elements as approved during the Design Development phase.

We will provide water calculations to demonstrate low water use for any new irrigation renovation as needed.

Our civil engineer (PCC) will assist in the base sheet preparation. They will provide overall site preparation of each site (limited to LVMWD property) for erosion control plans at a scale of 1”=40’-0 on standard 24”x36” sheet format. The erosion control plans will include BMP that entail the use of hydroseed, straw wattles, silt fencing, etc. to meet SWAPPS.

Our civil engineer (PCC) will also provide final documents for protection of potential debris flows from entering Reservoir No.2 design development phase.

QUALIFICATIONS AND RESUMES

DESIGN PHILOSOPHY

L. Newman Design Group, Inc. has been a leading local design firm for over 45 years.

During this time we have based our design philosophy on the belief that landscape architecture is a living, three-dimensional art form that unites people with their environment. If executed correctly, it should enhance our daily surroundings while being aesthetically appealing, environmentally responsible and fiscally conscious.

L. Newman Design Group, Inc. approaches each project on an individual basis, evaluating the specific needs of our clients. Our efforts have resulted in successful designs for organizations as large as government agencies to those as intimate as private residences. Although the majority of our work is within one hundred miles of our office, our global perspective has expanded our work nationally, with projects in Texas, Nevada and Florida, as well as internationally, to Taiwan and Egypt.

Our team approach to each project allows for not only the expeditious completion of our client's goals but also serves to most effectively utilize each of our staff member's personal strengths. We believe that by maintaining a strong line of communication between our personnel and our client, we can create an end product that both parties are proud of.

THE DESIGN ORGANIZATION

Mr. Robert Bombardier and Mr. Ryan Braddock are the principals of L. Newman Design Group, Inc. The company employs a staff of eight professionals consisting of landscape architects, planners, a certified arborist, who is also a qualified tree risk assessor, and administrative personnel. We approach each project from an analytical prospective, taking into consideration all elements of a site: the type of task required, the owner, the governmental agencies, and its users.

Our clientele includes large landholders, commercial developers, residential developers, and governmental agencies. Our involvement commences with research and analysis of data. We provide field assessment, site planning, schematic designs, sketches, delineating goals for the Client, preliminary concept plans, cost analysis, documentation, and working drawings, slope stabilization plans, including field observation at the time of implementation.

We look forward to the challenge of fulfilling the goals of the LVMWD to achieve the slope stabilization and irrigation renovation, prior to the Woosley fire damage.

OVERVIEW OF PROFESSIONAL SERVICES

The following outline will delineate the nature and extent of services available from our organization:

Special Landscape Architectural Services:

- Feasibility Studies and Site Analysis
- Master Site Development and Landscape Planning
- Building, Sitting and Parking Layouts
- Resort and Recreational Facilities Planning

Landscape Architectural Services:

- Review of Site Information
- Schematic Design
- Preliminary Design
- Demolition Plans
- Site Plans
- Construction and Dimensioning Plans
- Construction Details
- Grading and Drainage Plans
- Irrigation and Planting Plans
- Lighting Plans
- Special Features; Lake, Streams, Waterfalls and Entry Buildings
- Construction Budget Projections
- Landscape Observations/Certifications
- Xeriscape Design
- Green Design
- Storm Water Re-use

Special Environmental Biological/Horticultural Services:

- Native Habitat Restoration Plans
- Tree Consultation
- Special Horticultural Reports
- Oak, and other, Tree Reports
- Focused Environmental Impact Reports
- Landscape Maintenance Manuals
- Field Evaluation and Cost Projections for Tree Transplanting and Protection
- Native Plant Mitigation Plans
- Oak Tree Mitigation Plans
- Compliance Plans and Reports for California Department of Fish & Game, U.S. Fish & Wildlife Service, and Army Corps of Engineers.

PROJECTS

Water Agency Related Projects

- BIG SKY PUMP STATION, Simi Valley, Ca
- MOUNT SINAI WATER TANK , Simi Valley , Ca
- PARKER RANCH WATER TANK, Simi Valley, Ca
- MOORPARK COUNTRY CLUB WATER TANK Moorpark, CA. (District 8)
- LAKE SHERWOOD WATER TANK, Ventura County, Ca
- CAL AMERICAN WATER TANKS, Newbury Park (City of Thousand Oaks)
- LVMWD WATER TANK (Pardee Development) - Oak Park
- LVMWD TORCHWOOD TANK (AECOM), Westlake Village, Ca
- LVMWD CORDILLERA TANK AND PUMP STATION (New Millennium Homes) Calabasas, Ca
- LVMWD - WESTLAKE FILTER PLANT, Westlake Village, Ca

Community Master Plans (Residential)

- DOS VIENTOS RANCH; Newbury Park, CA – A Master Landscape Planned community of 2,300 homes.
- LANG RANCH; Thousand Oaks, CA – Master Landscape Plan Development and oak tree mitigation for a 2,257-unit housing project.
- BIG SKY; Simi Valley, CA – A Master Landscaped Planned community with parks.

Civic, Governmental & State

- CITY OF CAMARILLO; Old Town Streetscape; 2008 APWA Project of the Year
- CITY OF THOUSAND OAKS; Redevelopment agency; Commercial revitalization
- CITY OF FILLMORE; Various Streetscapes/Projects
- CITY OF WESTLAKE VILLAGE; Entry Monument and Citywide Streetscapes (2018)
- CITY OF AGOURA HILLS- Arterial Streetscape master plan (2018)

Senior Housing and Residential Multiple Housing

- UNIVERSITY VILLAGE; Thousand Oaks, CA – Retirement community
  BELMONT VILLAGE, Thousand Oaks, CA – Assisted Living
- HIDDEN CANYON CONDOMINIUMS; Thousand Oaks, CA
- SAGE MOUNTAIN SENIOR LIVING FACILITIES Thousand Oaks, ca

Commercial

- MUSEUM OF PRESIDENTIAL TRAVEL, REAGAN LIBRARY; Simi Valley, CA
- EXXON OIL CORPORATE OFFICES; Thousand Oaks, CA
- NORTH RANCH COUNTRY CLUB; Westlake Village, CA
- WESTON-MANDALAY MARKET PLACE; Port Hueneme, CA
- AMGEN CORPORATE BIOTECH BUILDINGS; Thousand Oaks, CA
- MT. SINAI MEMORIAL PARKS; Simi Valley/Los Angeles, CA
- DOLE WORLD HEADQUARTERS; Westlake Village, CA

Hotels

- FOUR SEASONS; Hotel and Spa, Westlake Village, CA
- HARBORTOWN INN RESORT; Ventura, CA
- RESIDENCE INN; Westlake Village, CA
- NEIGHBORHOOD INNS; Chatsworth, CA

Schools

- CALIFORNIA STATE UNIVERSITY at Hayward/ Fullerton/ Los Angeles
- CALIFORNIA LUTHERAN UNIVERSITY; Thousand Oaks, CA
- PEPPERDINE UNIVERSITY; Malibu, CA

Parks

- WESTLAKE PARK; Westlake Village, CA
- SPRING MEADOW PARK; Thousand Oaks, CA
- STECKLE PARK; Santa Paula, CA
- THREE SPRINGS PARK; Westlake Village, CA
- DOS VIENTOS PARKS; Newbury Park, CA
- RED MOUNTAIN PARK; Ventura County, CA

BACKGROUND

L. Newman Design Group, Inc.

- L. Newman Design Group, Inc. is a corporation that was incorporated in California on November 1, 1994. Prior name was Lee Newman & Associates.

- L. Newman Design Group, Inc. is located in Westlake Village, CA.

- Officers serving California accounts:
- Robert L. Bombardier
- Ryan J. Braddock

- L. Newman Design Group has 8 employees.

- This project will be assigned to the Westlake Village, CA office.

- Point of contact for this project:
- Although the RFP requests that the civil be the point of contact the majority of the work for Project #3 is mainly landscape with civic erosion control. In this case the landscape architect will be the point of contact with a back up of the civil when needed.

Robert L. Bombardier
L. Newman Design Group, Inc.
31300 Via Colinas, Suite 104
Westlake Village, CA 91362
(818) 991-5056

Richard Doss
Pacific Coast Civil, Inc.,
30141 Agoura Road Suite 200
Agoura Hills, CA. 91301

L. NEWMAN DESIGN GROUP, INC.

L. Newman Design Group, Inc. is a **local landscape architecture firm** with more than forty five years of experience. We have completed numerous landmark projects throughout the Conejo Valley and Southern California as well as in other states, and have an in depth reputation for solving problems within the design process.

Our firm is a State of California licensed landscape architect and, as such, is familiar with the local policies and procedures. We pride ourselves in understanding civil engineering, preservation of landforms, visuals, soils and environmental issues and, as oak tree specialists and horticultural consultants, remain constantly cognizant of the environment.

We have recently worked on numerous water tank and pump station design services that all include similar application for irrigation, and slop stabilization. The most recent is the LVMWD – Torchwood Tank in Westlake Village, located directly above the Three Springs Development

We work closely with agencies, planning staff, commissions, city councils to achieve the ultimate goals. We have also worked with our sub-consultant on other successful projects within the last five years.

L. Newman, founder of L. Newman Design Group, Inc. was in private practice since 1969. Lee Newman retired from the firm in 2012 and the corporation had a changing of the guards, is now owned by Robert L. Bombardier and Ryan J. Braddock. Robert L. Bombardier has been with the firm for 46 years, and was licensed in 1984, and Ryan J. Braddock has been with the firm 20 years. L. Newman Design Group, Inc. has since continued its business with the highest of quality in design and service.

We feel that our firm has proven over time to produce successful teams and can offer the highest quality of Landscape Architectural design service for the LVMWD water project renovations.

Although we have limited experience with FEMA/CAL-OES our portion with slope stabilization, irrigation and erosion control is simplified and processing the forms is therefore straight forward.

PRESIDENT - DESIGN DEVELOPMENT
Lead Management for this Project

ROBERT L. BOMBARDIER
LICENSED LANDSCAPE ARCHITECT
State of California License #2464

Mr. Bombardier joined the firm in 1974. He has completed a multitude of diverse projects including, Private and Public Parks, Public Streetscapes, Residential Developments, Schools, Commercial Centers, Hospitals, and Retirement Communities.

Mr. Bombardier is a Principal of the firm. He is responsible for Design Development, production, scheduling, specifications, bid processing, construction management and documentation.

Education & Registrations
1980 Landscape Architecture, UCLA Extension– Los Angeles, CA
1972 – 1976 Civil Engineering, Moorpark College – Ventura, CA
State of California Landscape Architect License #2464

Professional Experience
Mr. Bombardier has over forty five years of experience in the field of landscape architecture. He began as an intern for L. Newman Design Group, Inc., became a Licensed Landscape Architect in 1984, and is currently President of the firm. Tasks include client relations, site inventory, conceptual master planning, site analysis, scheduling, production, cost estimating, large-scale projects, pool and water feature design – commercial and residential, technical hydraulics, irrigation design, landscape design, drainage, hardscape design, wetland restoration, architecture, bid specifications, construction documents, construction reviews, construction management and inspection services.

Project Experience
The following is a partial list of projects completed that are affiliated with water tanks and pump stations and scheduling, construction documents, planning and construction management:

- **The Las Virgenes Municipal Water District (Torchwood tank) Westlake Village, CA)** completed for AECOM, irrigation, landscape and design, oak tree transplants for screening of new water tank.
- **The Las Virgenes Municipal Water District (Westlake Filter Plant) Westlake Village, CA.** Irrigation and landscape design for neighborhood viewshed/screening of new existing facility.

- **Big Sky Pump Station – Simi Valley, CA** (Project Manager) Provided concept designs for the pump building structure. Designed the water feature, walls, central irrigation system and landscape (2004-2006).
- **The Oaks of Calabasas – Pump Lift Station** (Project Manager) Provide perimeter walls, fencing, gates, ornamental columns, irrigation and landscape design from concept to implementation (2002 - 2003).

VICE PRESIDENT

RYAN BRADDOCK

Mr. Braddock joined the firm in 1998. He has completed a wide range of projects including Hotels, Public and Private Parks, Housing Developments, Commercial and Residential.

Mr. Braddock is a Principal of the firm. As Senior Project Manager, he is responsible for design development, production, construction management, and documentation. He also manages the office computer system and operations standards.

Mr. Braddock holds a Bachelor of Architecture Degree from California Polytechnic State University San Luis Obispo. He has been practicing Landscape Architecture and Design for more than fifteen years. His degree in Architecture gives him the ability to provide workable, functional and cost effective architectural elements for our Landscape Architecture endeavors.

Project Experience:
The following is a partial list of projects completed that are affiliated with water tanks and pump stations and scheduling, construction documents, planning and construction management:

- **Moorpark Wastewater Treatment Facilities – Moorpark, CA** Provided Preliminary Design Exhibits, Construction Documents and Construction Implementation Support Services - Moorpark, CA
- **Moorpark Water Tanks** – Moorpark, CA

ASSOCIATE LANDSCAPE ARCHITECT

RYAN KRESS, ASLA
LICENSED LANDSCAPE ARCHITECT
State of California License #6006, Department of Consumer Affairs

Mr. Kress joined the firm in 2005. Since then he has worked on numerous project included public streetscapes, private and public parks, state highway improvements, hotels, commercial centers, condominiums and residential homes.

Mr. Kress is a project manager and is experienced in construction documents and conceptual plans including computer renderings and photographic illustrations. He also assists in the management of the office computer system and operation standards.

Mr. Kress holds a Bachelor of Landscape Architecture from California Polytechnic State University San Luis Obispo with a concentration in Computer Applications.

Project Experience
The following is a partial list of projects completed that are affiliated with water tanks and pump stations and scheduling, construction documents, planning and construction management:

- **The Las Virgenes Municipal Water District (Torchwood tank) Westlake Village, CA)** completed for AECOM, irrigation, landscape and design, oak tree transplants for screening of new water tank.
- **The Las Virgenes Municipal Water District (Westlake Filter Plant) Westlake Village, CA.** Irrigation and landscape design for neighborhood viewshed/screening of new existing facility.

VICE PRESIDENT - HORTICULTURE

JOHN OBLINGER
OAK TREE CONSULTANT
CERTIFIED ARBORIST #WE-6820A
ISA QUALIFIED TREE RISK ASSESSOR

Mr. Oblinger entered the field of ornamental horticulture by working in landscape maintenance and installation, then in retail and wholesale nursery operations including plant propagation. He joined the firm in 1987 and is the principal investigator for residential and commercial horticultural studies that include tree assessment, project coordination, and development of landscape maintenance programs. He is an experienced AutoCAD user.

Mr. Oblinger holds a Bachelors degree from the University of Massachusetts and has been practicing horticulture for nearly 30 years.

REFERENCES

We have provided 3 references of work of similar nature.

I hereby certify that I have performed the work listed below:

Signature of Proposer

Description	Yr.	Contact Name & Telephone
LVMWD 5 MG Tank - Torchwood	2016	Mr. Glen Hille (805) 218-6718 (AECOM)
Borchard Road Pump Station (City of Thousand Oaks)	2014-15	Bill Weis (805) 498-1266 x7828 (Cal American Water Company)
Moorpark Wastewater Treatment Facility (County of Ventura Wastewater)	2009-12	Eric Keller (805) 378-3015 (County of Ventura)

Refer to the attached Experience Statement pages, for further reference information and descriptions of the projects as requested within the RFP.

Reference #1

Project: **LVMWD 5 MG Tank - Torchwood**

Agency: **LVMWD / Civil Engineer - AECOM**

Address: **1220 Avenida Acaso, Camarillo, CA 93012-8750**

Telephone: **(805) 218-6718**

Contact: **Glen Hille** Title: **Vice President**

Service dates: **2015 to 2017**

Project Section

Summary of Project: **Provided landscape and irrigation design for the new 5 million gallon tank within the Three Springs Development located in Westlake Village, CA.** The project consisted of Preliminary Design and construction documents for landscape and irrigation including large transplanted oak trees from Agoura Road and presentations to the neighborhood. We worked very closely with John Zhao of LVMWD on this project.

Reference #2

Project: **Borchard Road Pump Station**

Developer: **City of Thousand Oaks / Cal American Water Company**

Address: **Cal American Water Company**
2439 W. Hillcrest Rd., Newbury Park, CA 91320

Telephone: (805) 498-1266 x7828

Contact: **Bill Weis (Cal American Water Company)** Title: **Engineer**

Service dates: **2017-2018**

Project Section

Summary of Project: **Provided Preliminary Design Concepts, Construction Documents and Construction Implementation Support Services for the Borchard Road Pump Station located in Newbury Park, CA.** The design consisted of drought tolerant landscape, irrigation, slope stabilization and rail fencing renovation along the existing streetscape.

Reference #3

Project: **Moorpark Wastewater Treatment Facility**

Developer: **County of Ventura - Waterworks District #1**

Address: **7150 Walnut Canyon Road**
Moorpark, CA. 93020

Telephone: **(805) 378-3015**

Contact: **Eric Keller** Title: **Deputy Director / Operations & Maintenance**

Service dates: **2009-2012**

Project Section

Summary of Project: **Provided Preliminary Design Exhibits, Construction Documents and Construction Implementation Support Services for the Moorpark Wastewater Treatment Facility located in Moorpark, CA.** The project consisted of over 3.8 acres of landscape and irrigation to screen the facility from public view along California State Route 118. The project included large berms, slopes security fencing, access gates and a facility monument sign wall.

COMPENSATION

Project 3: LVMWD Headquarters, Reservoir No. 2, Rancho & Misc Facilities

The following is a breakdown of hours per task for the LVMWD Headquarters , Reservoir No.2, Rancho Site and misc. facilities (17 sites in total).

Preliminary field summary report related to irrigation, landscape and erosion contol -limited to fire damage areas. This covers a site visit to each site, photograph and summarize a list for discussion and recommendation to be presented to the district.

1. Westlake Pump Station
2. Seminole Pump Station
3. Reservoir No. 2 (Recycled Water Reservoir)
4. Kimberly Tank
5. Torchwood Tank
6. Indian Hills Tank
7. Ranch View Tank
8. Morrison Tank
9. Jed Smith 1 & 2 Tanks
10. Seminole Tank
11. Lower Oaks Tank
12. Latigo Tank
13. Cordillera Tank
14. Headquarters
15. Rancho Las Virgenes Composting Facility
16. Centrate Tank/Farm Control Building Site
17. Equestrian Reservoir Site (Flat)

Fee Proposal Estimated Hourly (Task Breakdown for LNDG)

L. Newman Design Group, Inc. proposes to provide the following services as the point of contact for all of the landscape architecture services.

Site Research/Review

Research existing conditions that remain after the fire, physically review each site, photograph and provide a written summary of existing conditions.

- Principal Landscape Architect #1: 17 hrs.
- Associate Landscape Architect: 68 hrs.

Design Development Phase

In concert PCC, L. Newman Design Group, Inc. will prepare Base Maps and Concept Plans for each of the seventeen sites, and additional recommendations for alternatives. Anticipate that site topography may be derived from public sources (i.e., County GIS-NET), as necessary and use as-builts provided by The District..

- Principal Landscape Architect #1: 25 hrs.
- Principal Landscape Architect #2: 20 hrs.
- Associate Landscape Architect: 70 hrs.

Construction Documents and Specifications

The consultant shall provide a set of biddable construction drawing and Specifications (including a bid schedule breakdown) for irrigation and landscape (slope stabilization).

- Principal Landscape Architect #1: 17 hrs.
- Principal Landscape Architect #2: 17 hrs.
- Associate Landscape Architect: 84 hrs.

Project Cost Estimation

Prepare Cost Estimate quantities for each site. (LNDG to combine PCC into their estimate of construction cost).

- Principal Landscape Architect #1: 6 hrs.
- Principal Landscape Architect #2: 10 hrs.
- Associate Landscape Architect: 20 hrs.

Project Meetings

Attend project meetings with PCC, and LVMWD staff to present the recommendations. All meetings will be invoiced hourly, per the Schedule of Fees

- Principal Landscape Architect #1: 16 hrs.

FEMA / CAL-OES Administration

- Principal Landscape Architect #1: 40 hrs.

Field Review of Construction Implementation (For irrigation and landscape Renovation)

Provide for site visits to assure implementation per plan and compliance on each site.

- Principal Landscape Architect #1: 10 hrs.
- Associate Landscape Architect: 51 hrs.

Fee Proposal Estimated Hourly (Task Breakdown for Pacific Cost Civil, Inc.)

The following understandings and assumptions form the basis for this proposal:

- In general, Pacific Coast Civil, Inc. (PCC) will provide sub consultant civil engineering services to L. Newman Design Group (hereinafter called LNDG) on behalf of the Las Virgenes Municipal Water District (hereinafter referred to as Client) for the subject properties.
- The subject properties are listed in the RFP and within the LNDG Proposal (17 total)
- From a civil engineering standpoint, the Client is looking to develop BMP's for Erosion Control and any additional recommendations of BMP's to address Reservoir No. 2 debris flows.

As a sub-consultant to L. Newman Design Group, Inc. PCC proposes to provide the following services as the point of contact for all of the civil engineering services.

Site Research/Review

Research existing conditions that remain after the fire, some physically and some by photos gathered by LNDG.

- Senior Project Manager: 4 hrs.
- Project Manager: 6 hrs.
- Senior Designer: 16 hrs.
- CAD Technician: 8 hrs.

Erosion Control Plans (17 Sites)

In concert with Client and L. Newman Design Group, PCC will prepare BMP Erosion Control Plans for each of the seventeen sites, and additional recommendations to address Reservoir No. 2 debris flows. Anticipate that site topography may be derived from public sources (i.e., County GIS-NET), as necessary.

- Project Manager: 28 hrs.
- Senior Designer: 32 hrs.
- CAD Technician: 216 hrs.

Project Cost Estimation

Prepare Cost Estimate quantities for each site's Erosion Control. (LNDG to combine into their estimate of construction cost).

- Project Manager: 4 hrs.
- Engineering Designer: 42 hrs.
- Technical Typing: 4 hrs.

Project Meetings

Attend project meetings with Client, and LVMWD staff to present the recommendations. All meetings will be invoiced hourly, per the Schedule of Fees and Billing Procedures included herein. Allowance for 3 meetings of 2 hour duration each is included.

- Senior Project Manager: 6 hrs.

Field Review of Implementation

Provide for site visits to assure implementation per plan and compliance on each site.

- Project Manager: 16 hrs.

Hourly Rates (L. Newman design Group, Inc.)

Principal Landscape Architect #1	$160.00
Principal Landscape Architect #2	$135.00
Senior Associate Landscape Architect	$90.00
Associate Landscape Architect	$75.00
Landscape Draftsperson	$60.00
Horticultural Consultant	$100.00
Clerical	$35.00
Consultation/Testimony/Public Hearings	$185.00

Additional Expenses:

Mileage	$	.50/mile
Tree Tags	$	1.00 ea
Photographs (See Contract)	$	--------

Payment for Services:
Statements for our services will be presented monthly, representative of our progress, or upon completion of a phase of work. All invoices are due and payable within thirty (30) days of invoice. Additional services are billed monthly as above or upon completion. Invoices not paid within thirty (30) days shall accrue interest at the rate of 8% per annum on the unpaid balance. Reimbursable expenses are billed at cost plus a 10% handling charge towards allowance as provided herein. These professional service rates are subject to change on an annual basis.

Hourly Rates (Pacific Coast Civil, Inc.)

Office:

Principal	$300.00
Presentation @ Public Hearings	$350.00
Expert Witness/Court Appearance	$500.00
Planner/Expeditor	$185.00
Senior Project Manager	$225.00
Project Manager	$190.00
Project Engineer	$160.00
Project Coordinator	$155.00
Principal Planner	$200.00
Senior Designer	$150.00
Senior Planner	$130.00
Engineering Designer	$125.00
Planner	$110.00
Storm Water Coordinator	$115.00
CAD Technician	$90.00
Engineering Processor	$80.00
Technical Typing/Messenger/Delivery	$75.00

Field:

Licensed Surveyor	$225.00
Field Coordinator	$145.00
Field Calculations	$130.00
Survey Office Calculations	$120.00
One-Man Crew	$170.00
Two-Man Crew	$230.00
Three-Man Crew	$300.00

- PCC shall invoice the Client on a monthly basis for services performed with payment due and payable within 30 days. All payments extending forty-five days from date of invoice shall accrue a finance charge at the rate of 1-1/2% per month, which is equivalent to 18% per annum. Unless mutually satisfactory arrangements are made for delay of payment in excess of forty-five days from date of invoice, PCC has the option of discontinuing all work until payment is made.
- Expenses for other specialized technical services, printing, reproductions, and other like direct costs i.e. mileage, postage, etc. shall be billed in addition at standard commercial rates. A ten-percent fee for administration, coordination and handling will be added to services subcontracted through PCC.
- In the event an action, lawsuit, or legal proceeding becomes necessary to enforce, the provisions of this contract or which arises out of the subject matter of this contract, the party prevailing in such action shall be awarded, in addition to any other damages, attorney fees and costs actually incurred in the said action suit or proceeding. In the event that we are compelled to foreclose on a lien, our attorneys' fees shall be assessed, at a minimumof $2,500.
- PCC fees as quoted will remain in effect until December 31, 2019, at which time we reserve the right to adjust these rates for any incomplete work to the extent of cost and salary increases which are adjusted on that date.

Summary of Costs

LNDG / PCC propose to provide the services as outlined in the above SCOPE OF SERVICES for the following fees:

LANDSCAPE ARCHITECTURE (LNDG) AND CIVIL ENGINEERING (PCC) SERVICES		
	DESCRIPTION	
	Site Research/Review (LNDG)	$7,800
	Site Research/Review (PCC)	$5,200
	Design Development Phase (LNDG)	$14,125
	Erosion Control Plans (PCC)	$30,640
	Construction Documents (LNDG)	$30,625
	Project Cost Estimation (LNDG)	$4,560
	Project Cost Estimation (PCC)	$7,360
	Project Meetings (LNDG)	$3,200
	Project Meetings (PCC) (allowance for 3 meetings @ 2 hours each)	$1,350
	FEMA / CAL-OES Administration (LNDG)	$6,400
	Field Review (LNDG)	$5,425
	Field Review (PCC)	$3,040
	Sub-Consultant Mark-up (LNDG)	$2,380
	ESTIMATED BUDGET	**$122,105**

In the event Client requests L. Newman Design Group, Inc. to perform services in addition to tasks specifically defined under Scope of Services, Client shall pay L. Newman Design Group, Inc. for all such requested extra services at the hourly rates set forth on the Schedule of Fees and Billing Procedures which are incorporated herein by reference in full. All such extra work shall be requested in writing and approved prior to commencement of work and will be billed separately by L. Newman Design Group, Inc.

Alternative: If instrumental survey is required, the cost will be an additional approximately $6,000 per site.

ASSUMPTIONS AND INCLUSION / EXCLUSIONS

It is assumed that the LVMWD has provided all the various site documents available including all as-builts.

It is assumed that the documents provided (including fencing or property lines are the limits of work area and are accurate). No further boundary survey or title research will occur. In the event the documents provided do not include enough data, or we cannot pull from county GIS maps. The consultant may need some additional civil survey or isolated drone flight information (As an alternate cost included herein.

It is assumed Project #3 does not require an architect, structural engineer, mechanical engineer, soils engineer or agronomy in the event the districts wants one of these disciplines involvement , we shall obtain cost to be passed on as an additional cost to the contract.

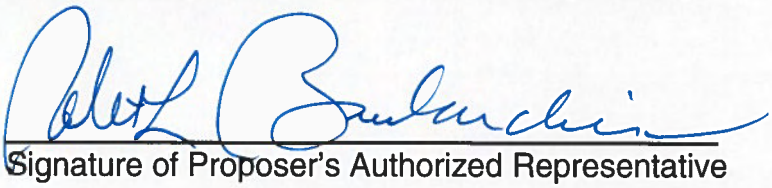
INCLUSIONS – Any Preliminary exhibits will just be hard colored on base sheets to delineate areas of impact outside burned areas with text for any alternatives. Irrigation infractions will be provided in order to irrigate areas that are impacted. It may require overlap into non burned areas with notes to verify the rest is in working order. We will cover this 5to approximately 200 feet.

EXCLUSIONS – Irrigations pump design, existing tree assessment, new trees, and final as-bulits.

CERTIFICATE OF INSURANCE

PROPOSER HEREBY CERTIFIES that the proposer have reviewed and understands the insurance coverage requirement specified in the Request For Proposals No. Should the proposer be awarded the contract for the work, Proposer further certifies that the proposer can meet the specified requirements for insurance, including insurance coverage of the subcontractors, and agrees to name the Las Virgenes Municipal Water District.

L. Newman Design Group, Inc.
Name of Proposer (Person, Firm or Corporation)



Signature of Proposer's Authorized Representative

Robert Bombardier – President
Name & Title of Authorized Representative

February 28, 2019
Date of Signing

Water Tanks

Torchwood (5 Million Gallon) Water Tank

- Client: Las Virgenes Municipal Water District
  c/o AECOM

- Project Description: Provided landscape and irrigation design for the new 5 million gallon tank within the Three Springs Development located in Westlake Village, CA
  .
- Type of Service Provided: Preliminary Design and construction documents for landscape and irrigation including large transplanted oak trees from Agoura Road and presentations to the neighborhood.

- Berm planting and irrigation
- Transplanted mature oak trees to provide maximum screening

- Preliminary design
- Create a nature plant palette to blend with existing hillside

The Oaks of Calabasas - Pump Station and Tank Sites

- Client: New Millennium Homes
- Project Description: A master planned, 500 unit single-family housing development.
- Service Provided: Preliminary themed landscape master plan, project entry features, architecture, water features, streets, mini parks, fountains and overhead structures.

- Roadway designs
- Special hardscape entry features, gates and sculptures
- Budget projections
- Landscape planting

- Street lighting and signage
- Bronze sculptures
- Structural drawings
- Oak tree reports and transplanting of 500 on-site specimens

Big Sky Ranch - Pump Station and Slopes

- Clients: Shea Homes, DR Horton, and Standard Pacific
- Project Description: A 1,600 lot master planned community.
- Service Provided: Master Planning, Oak Tree Consulting, Model Homes, Nine Fully Developed Tracts and Residential Estate Lots.

- Pump Station with Water Feature Screen
- Oak Reservation and Transplants
- Central Irrigation Design

- Slope Stabilization
- Slope Irrigation
- Slope Planting
- Landscape Design
- Greenbelts

Dos Vientos Ranch - Debris Basins

- Clients: Operating Engineers and Miller Brothers
- Project Description: A 2,300 home master planned community, recreation parks with sports fields, lighting, open space play area, recreational courts and children's play areas.
- Service Provided: Master Planning, Landscape Architecture, Coordination with the City of Thousand Oaks Planning and Conejo Recreation and Park District. Several individual tracts within the community for various developers.

- Entry Features
- Meandering Walks
- Neighborhood Parks
- Slope Stabilization and Planting
- Slope Irrigation

- Vegetated Debris Basins
- Fuel Modification Desgin

Sherwood Country Club - Tank Site

- Client: Sherwood Development
- Project Description: 1,965 acre premier golf community including a private championship golf course, tennis center, and custom homes set amid the Santa Monica Mountains.
- Service Provided: Overall landscape master plan, oak tree preservation and relocation and coordination with Ventura County public agencies.

- Golf club house landscape design
- Tennis club design
- Oak tree transplants
- Model homes

- Brick entry gates
- Streetscapes
- Oak tree transplants

Three Springs Community and Park - Westlake Village, CA

- Client: KLK Development Company/Wildan for the City of Westlake Village
- Project Description: A scenic community and park in a natural setting with preserved oak trees, open space play area, basketball court and childrens play area.
- Service Provided: Oak tree Consulting, Master Planning, Landscape Architecture, Coordination with LA County Planning and Parks and Recreation Departments.

- Master Plan
- Oak Tree Preservation
- Irrigation Design
- Planting Design
- Walk Layout
- Contour Grading
- Play Equipment

- ADA Access
- Sport Courts
- Lighting
- VITA Course
- Plant Selection
- Site Observation
- Construction Support

Newbury Gateway Park - Storm Drain Improvements

- Client: The City of Thousand Oaks - Public Works
  c/o Hall & Foreman, Inc.
- Project Description: Modify an existing park to include bio-filtration and provide a surrounding street run-off solution for drainage.
- Type of Service Provided: Field review, preliminary design, 3D rendering, construction documents for irrigation and landscape design. Worked with City staff, City maintenance division and Conejo Recreation and Parks District.

- Bio-filtration
- Upgrade existing irrigation equipment to a state of the art E.T. water conserving controller and sprinklers

- Xeri-scape plant palette
- Redesign direct deep flowing channel to make a more organic free flowing channel and flatter sides

Oak Tree Preservation and Relocation

- Client: Various clients
- Preserved in place more than 1,000 trees while allowing for creative development of custom homes and a country club - North Ranch, Thousand Oaks, CA
- Transplanted over 2,500 trees with a 90% success rate - Sherwood Country Club, Ventura, CA

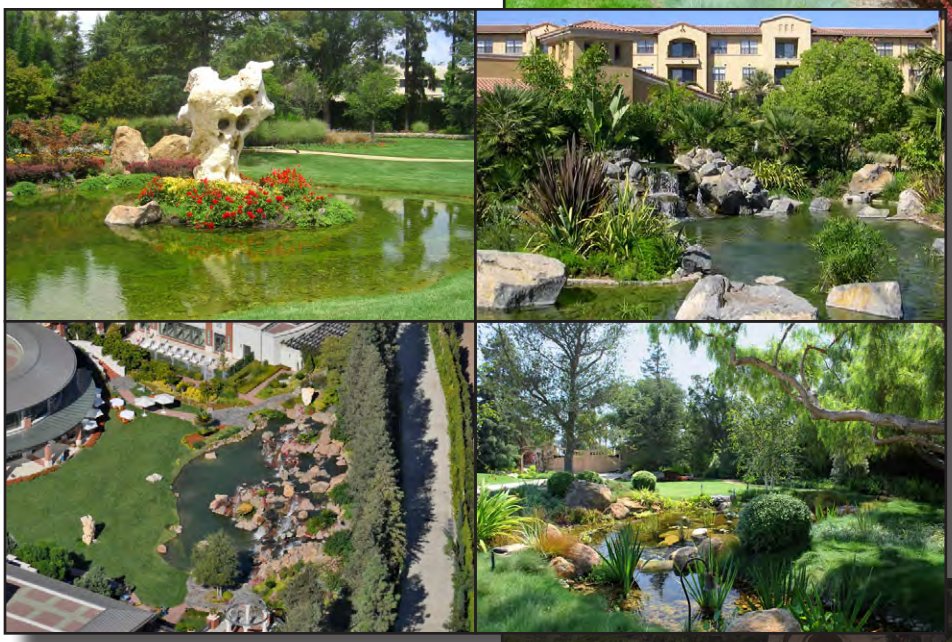
- World’s largest and oldest oak tree relocation - “Old Glory” - Santa Clarita, CA
- Preservation of resources
- Creative construction techniques

- Maintenance guidelines
- Acorn harvesting and growing programs
- Oak tree and tree reports

Specialty Elements

- Pedestrian oriented gardens and paths
- Ornamental tree transplants
- Floral gardens
- Lighting
- Signage

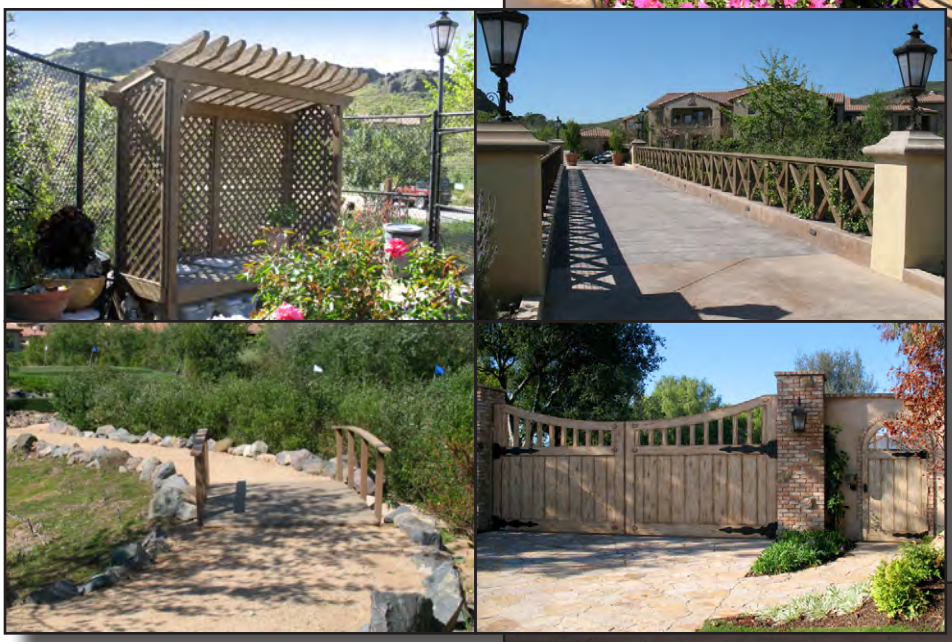
- Water Features
- Aquatic planting
- Wetland habitat



- Fountains
- Meandering streams
- Themed gardens

Specialty Elements

- Butterfly gardens
- Pedestrian trellises
- Raised herb garden
- Eatible plant gardens
- Custom signage and entry features



- Specialty shaded seating areas
- Custom bridges
- Decomposed granite pathways and trails
- Entry gates

- Specialty paving
- Authentic or simulated rocks and boulders
- Fossil garden
- Sculptures

Water Tanks

Mount Sinai Memorial Park - Simi Valley, CA

- Client: L.C.B. & Associates / Mt. Sinai Memorial Parks
- Project Description: Landscaping for all common areas and features that reflect the jewish religion.
- Service Provided: Landscape architecture, water tank, wetland restoration, preliminary plans and budget projections.

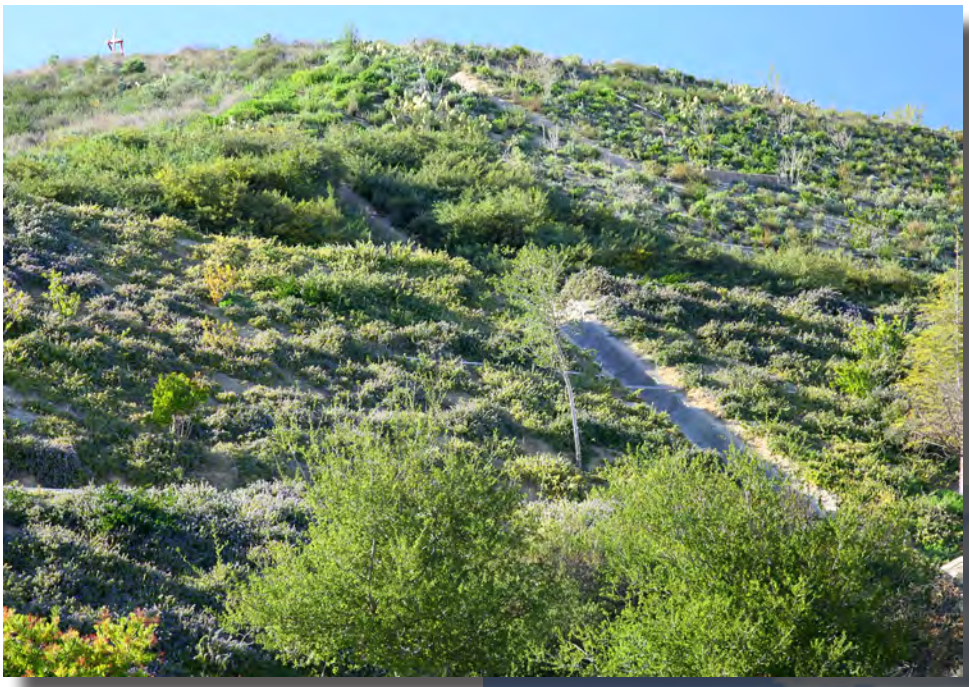
- Water Tank
- Wetland restoration
- Slope Planting and irrigation design
- Construction documents

- Entry features
- Structural drawing
- Specialty gardens
- Governmental processing
- Master street landscape plans

Drought Tolerant Native Restoration

Big Sky Ranch - Simi Valley

- Clients: Shea Homes, DR Horton, and Standard Pacific
- Project Description: A 1,600 lot master planned community.
- Service Provided: Master Planning, Oak Tree Consulting, Model Homes, Nine Fully Developed Tracts and Residential Estate Lots.
- Project Duration: 2000-2009



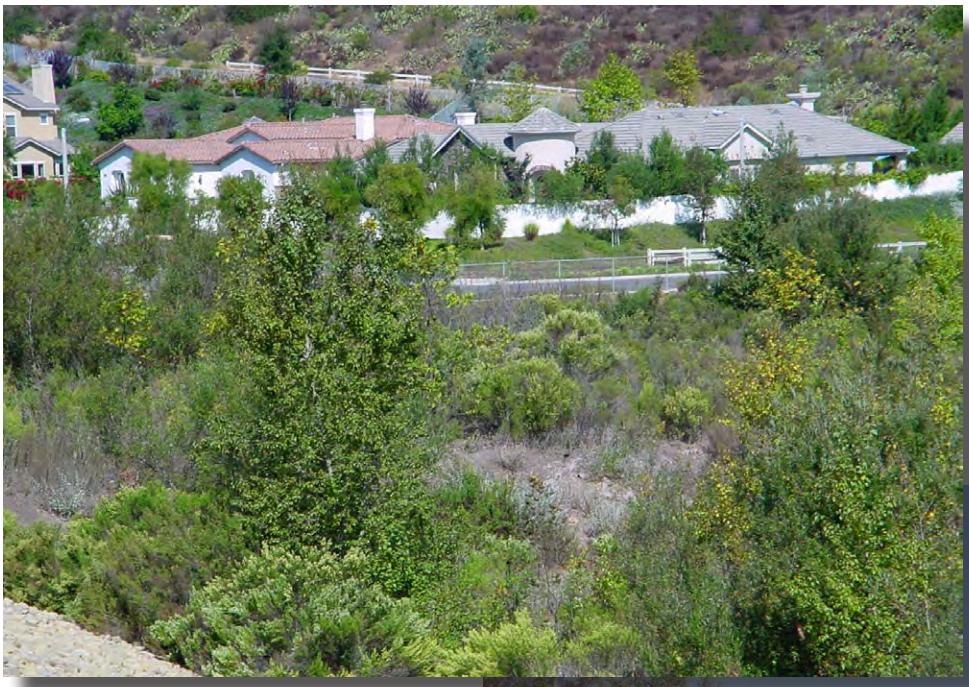
- Irrigation design
- Native hydroseed mix
- Fuel modification clearance
- Transition zones
- Sustainable landscape

- Individual tracts
- Slopes
- Open space

Bio Basins and Channels

Various Sites - Ventura County, CA

- Project Description: Residential developments
- Service Provided: Irrigation and landscape of slopes
- Project Duration: 2001 - 2008



- Detention basin
- Erosion control
- Sustainable landscape
- Temporary irrigation

- Bio infiltration
- Native Planting
- Ornamental to native transition

March 28, 2019 JPA Board Meeting

TO: JPA Board of Directors

FROM: Facilities & Operations

Subject : JPA Infrastructure Investment Plan: Fiscal Years 2019-20 through 2023-24

SUMMARY:

In preparation of the proposed Fiscal Year 2019-20 JPA Budget, staff reviewed the approved Fiscal Years 2018-20 Budget Plan to identify potential areas that might require adjustments. There are no recommended changes to the proposed operating budget, and no changes were requested by TSD staff. The only area requiring adjustment is for the JPA's capital improvement projects, which will be highlighted in the JPA Infrastructure Improvement Plan (IIP). The Preliminary Fiscal Year 2019-20 JPA Budget will be presented to the Board on April 29, 2019. Any proposed changes will be incorporated and the final budget will be recommended for adoption on June 3, 2019.

The Infrastructure Investment Plan (IIP) is a planning document used to identify, prioritize and establish preliminary budgets for facility improvements and replacement projects over a five-year planning period. The IIP incorporates proposed projects from a number of sources including the Sanitation and Recycled Water Master Plans, recommendations from specific facility plans, regulatory requirements and facility condition assessments.

The revised and updated IIP comes at the mid-point of the two-year budget cycle and identifies important modifications from the IIP presented as part of the Fiscal Year (FY) 2018-19 budget process. The revised plan includes a net increase in recommended appropriations for FY 2019-20 of approximately $1.1 million. Excluding the new Woolsey Fire Facility Repair Projects, the recommended FY 2019-20 appropriations would be approximately $1.7 million below the figure included in Fiscal Years 2018-20 Budget Plan. Staff is actively working to receive reimbursement for Woolsey Fire Facility Repair Projects, either through the JPA's insurance carrier or the California Office of Emergency Services and Federal Emergency Management Agency.

RECOMMENDATION(S):

Receive and file the JPA Infrastructure Investment Plan for Fiscal Years 2019-20 through 2023-24.

FISCAL IMPACT:

No

ITEM BUDGETED:

No

FINANCIAL IMPACT:

The IIP is a planning document and does not involve the appropriation of funds. Appropriations for proposed projects for Fiscal Year 2019-20 will be recommended in the JPA budget.

DISCUSSION:

The IIP covers a five-year planning period and uses the Sanitation and Recycled Water Master Plans, recommendations from specific facility plans, known regulatory requirements and facility condition assessments to identify proposed capital improvement projects and programs.

The FY 2019-20 update to the IIP focuses on updating and revising projects bracketed within the two-year budget planning period (FY 2018-19 to FY 2019-20). Following is a summary of significant changes to the IIP, as compared to the version presented during the FY 2018-19 JPA budget process.

Program Area	Recommended Appropriation Change
Pure Water Project Las Virgenes-Triunfo	($1,498,841)
Rancho Las Virgenes Composting Facility/Farm	$597,849
Tapia Water Reclamation Facility	($768,625)
Woolsey Fire Facility Repair Projects	$2,775,000
Net Change to IIP	**$1,105,383**

A detailed list of all recommended modifications to the IIP is provided in a summary format (Appropriation Variance Analysis) and in the detailed project description pages.

Prepared by: Doug Anders, Administrative Services Coordinator

ATTACHMENTS:

JPA Infrastructure Investment Plan: Fiscal 2019-20 through 2023-24

Infrastructure Investment Plan (IIP)

Fiscal Year 2019/20
Mid Budget Cycle Revision
March 28, 2019

Table of Contents

Las Virgenes - Triunfo Joint Powers Authority
Infrastructure Investment Plan
FY 2019/20

Overview

The Capital Improvement Plan or Infrastructure Investment Plan (Plan) is a planning document used to identify, prioritize and establish baseline expenditures for facility improvements or replacement projects which ensure the Las Virgenes - Triunfo Joint Powers Authority can consistently meet the needs of the public, both for now and into the future.

This mid budget cycle Plan reviews anticipated work over the initial planning horizon and updates anticipated spending for individual programs.

The information provided in this Plan is intended to inform the reader of current and proposed capital improvement projects, their status and potential costs. As a supplement to the Infrastructure Investment Plan presented during budget development, Section 2 of this update includes an appropriation variance analysis indicating proposed project budget changes from the original document. Detailed project descriptions, sorted in numerical order, are found in Section 3.

This mid budget plan has been prepared and reviewed by staff to confirm the priority and need of originally identified candidate projects for funding consideration and accomplishment. The Plan incorporates facility needs identified by a number of sources. These include: integration of new facility improvements identified in master planning documents; implementation of actions recommended in major studies; the facilities or programs necessary to meet regulatory compliance requirements; and, maintenance, repair, or replacement of component systems to continue normal operations.

The Plan places the prospective projects into various program years to organize them over the planning period. Because of the complexity of facility planning, either deferral or speeding up of projects may occur. These changes are dealt with in the Annual Budget and are amended in the next year's Plan. Receipt of the Infrastructure Investment Plan by the JPA Board of Directors is recognized as one of the key planning steps necessary to formulate an overall Financial Plan and Budget for the JPA.

Summary

This mid budget cycle update Plan reflects the previous trend on placing emphasis on "replacement-funded" projects for Recycled Water and Sanitation facilities. The proposed expenditures reflect the replacement of maturing district infrastructure and the need to replace, upgrade or refurbish existing systems to continue to provide high quality, reliable service.

Exceptions to this trend are the JPA's "Pure Water Project" and newly identified projects related to the Woolsey Fire.

Section 2 of this document compares the appropriations included in the Fiscal Years 2018-20 two year adopted budget to the updated project estimates. Excluding the new Woolsey Fire recovery projects, recommended FY 2019-20 appropriations would be approximately $1.7 million below the figure included in the approved budget. Including the fire recovery projects, recommended appropriations are approximately $1.1 million higher than was adopted in the budget.

Infrastructure Investment Plan
Fiscal Year 2019/20 - Fiscal Year 2023/24

Appropriation Variance Analysis

Project Number	Title	FY19/20 (from 18/19 budget)	FY19/20 (proposed)	Approp. Change (variance)
ADMINISTRATIVE				
10520	SCADA System Communication	0	0	0
	SUB-TOTAL ADMINISTRATIVE	$0	$0	$0
PURE WATER PROJECT				
10635	Pure Water Project	3,500,000	0	-3,500,000
10636	Pure Water Project - Mixing and Dilution	0	0	0
10638	Pure Water Demonstration Project	0	2,001,159	2,001,159
	SUB-TOTAL PURE WATER PROJECT	$3,500,000	$2,001,159	$-1,498,841
RANCHO/FARM				
10608	Rancho Amendment Bin and	0	0	0
10668	Rancho Las Virgenes Storm Water	0	11,767	11,767
10670	Centrate 24" Valve Replacement	0	114,000	114,000
10680	Rancho Las Virgenes Digester Cleaning	1,300,000	1,574,082	274,082
10687	Rancho Lighting Efficiency Upgrade	0	0	0
10688	Rancho Solar Generation Project -	0	198,000	198,000
60033	Pavement Restoration Rancho	533,320	533,320	0
70003	Rancho Reliability Improvements: FY 20	0	0	0
70014	Rancho Reliability Improvements FY 19	100,000	100,000	0
70019	Centrate Tank Inspection and	0	0	0
80748	Rancho: Replace Agitators	0	0	0
	SUB-TOTAL RANCHO/FARM	$1,933,320	$2,531,169	$597,849
RECYCLED WATER				
10629	Canyon Oaks Park RW Main Extension	0	0	0
10665	Cordillera Tank Rehab	0	0	0
10666	Calabasas Park Recycled Water Main	0	0	0

Infrastructure Investment Plan
Fiscal Year 2019/20 - Fiscal Year 2023/24

Appropriation Variance Analysis

Project Number	Title	FY19/20 (from 18/19 budget)	FY19/20 (proposed)	Approp. Change (variance)
	SUB-TOTAL RECYCLED WATER	$0	$0	$0
TAPIA				
10564	Centrate Equalization Tank	0	0	0
10567	Programmable Logic Controller	376,700	923,450	546,750
10611	Tapia Duct Bank Infrastructure Upgrade	0	0	0
10619	Summer Season 2013 TMDL	2,220,000	809,985	-1,410,015
10626	Process Air Improvements	0	0	0
10653	Tapia Rehab FY17-18	0	0	0
10658	Tapia Sluice Gate and Drive	212,800	0	-212,800
10661	A/B Bus Electrical Modification	0	0	0
10667	Tapia Headworks White Room	0	357,440	357,440
10669	Develop Tour Seating Area at Tapia	0	0	0
10682	Rancho Las Virgenes: FOG Receiving	0	0	0
201808	Tapia Effluent Pump Station 4160 Volt	100,000	100,000	0
201810	Tapia Tertiary Filter Rehabilitation	60,000	60,000	0
201814	Tapia Building Access Control	50,000	0	-50,000
60030	Grit Chamber Mixing System	0	0	0
60031	New RAS Wet Well and Pumps	0	0	0
60032	Pavement Restoration Tapia	0	0	0
70008	Tapia Water Reclamation Facility	0	0	0
70015	Tapia Water Reclamation Facility	100,000	100,000	0
99972	Primary Effluent Equalization	0	0	0
	SUB-TOTAL TAPIA	$3,119,500	$2,350,875	$-768,625
WOOLSEY FIRE				
70025	Rancho Fire Repair - Woolsey Fire		1,942,500	1,942,500
70030	JPA Facility Facilities Repair - Woolsey		832,500	832,500

Infrastructure Investment Plan
Fiscal Year 2019/20 - Fiscal Year 2023/24

Appropriation Variance Analysis

Project Number	Title	FY19/20 (from 18/19 budget)	FY19/20 (proposed)	Approp. Change (variance)
	SUB-TOTAL WOOLSEY FIRE		$2,775,000	$2,775,000
	TOTAL ALL PROJECTS	$8,552,820	$9,658,203	$1,105,383

SCADA System Communication Upgrades

99906

Job Number: 10520	**Priority:** 2
Responsible Division: Technical Services	**Program:** No
FY Originated: FY12-13	**Project Status:** On-Hold

Business Value:
Innovative and Efficient Operations

Key Standard:
Invest in Efficiency Improvements

Scope of Work:
Migration of the existing communication system from a serial radio network to an Ethernet based radio network. Provide redundant data paths for uninterrupted communication. Eliminate need to rely on telephone company equipment.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$93,100
Project Expense (through 1/31/2019):	$32,447
Anticipated Project Expense (2/1/2019 - 6/30/2019):	$0
Anticipated Carryover:	$60,653

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding		$285	$285			$570	
Construction		$51,000	$33,000			$84,000	
Labor and G&A Expense		$16,076	$10,560			$26,636	
TOTALS	$0	$67,361	$43,845	$0	$0	$111,206	**$143,653**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:
Estimate is based on the initial bid results received and includes contingency for added sites.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement 100.0%	RW Replacement	TSD 29%

Centrate Equalization Tank

99932

Job Number: 10564	**Priority:** 2
Responsible Division: Technical Services	**Program:** No
FY Originated: FY13-14	**Project Status:** Complete

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Construct a centrate equalization tank at the centrate treatment facility. Provide mechanical and/or chemical cleaning of minerals from the existing centrate line. No planning is needed due to the availability of existing documentation.

Rehabilitation of the centrate treatment line is possible because of the availability of the existing bypass treatment line.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$2,343,008
Project Expense (through 1/31/2019):	$2,067,588
Anticipated Project Expense (2/1/2019 - 6/30/2019):	$0
Anticipated Carryover:	$275,420

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction							
Labor and G&A Expense							
TOTALS	$0	$0	$0	$0	$0	$0	**$2,067,588**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Engineer's opinion of probable construction cost based on the final design.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction 25.0%	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement 75.0%	RW Replacement	TSD 29%

Programmable Logic Controller Upgrades

99936

Job Number: 10567	**Priority:** 2
Responsible Division: Technical Services	**Program:** No
FY Originated: FY13-14	**Project Status:** On-Hold

Business Value:
Innovative and Efficient Operations

Key Standard:
Invest in Efficiency Improvements

Scope of Work:
This project replaces programmable logic controllers (PLC's) with newer PLCs and provides necessary equipment upgrades (fiber optics, network switches and programming) to complete the installation. This is a program project which addresses Tapia in the first two years and centrate treatment in the third year. Design will occur in the first year for all facilities.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$332,850
Project Expense (through 1/31/2019):	$0
Anticipated Project Expense (2/1/2019 - 6/30/2019):	$79,700
Anticipated Carryover:	$253,150

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design	$64,600					$64,600	
Bidding	$2,000					$2,000	
Construction	$1,000,000	$52,800				$1,052,800	
Labor and G&A Expense	$110,000	$0				$110,000	
TOTALS	$1,176,600	$52,800	$0	$0	$0	$1,229,400	**$1,309,100**

APPROPRIATION REQUEST: $923,450

Basis for Project Cost Estimate:

Cannon Corporation PLC evaluation & Wunderlich - Malec evaluation.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement 100.0%	RW Replacement	TSD 29%

Rancho Amendment Bin and Conveyance Modification Project 60000

Job Number: 10608	**Priority:** 2
Responsible Division: Technical Services	**Program:** No
FY Originated: FY 16-17	**Project Status:** On-going

Business Value:
Innovative and Efficient Operations

Key Standard:
Invest in Efficiency Improvements

Scope of Work:
The project consists of installing a new smaller amendment bin and modification to the conveyor system to simplify the amendment conveyance process.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$2,070,518
Project Expense (through 1/31/2019):	$283,216
Anticipated Project Expense (2/1/2019 - 6/30/2019):	$1,787,302
Anticipated Carryover:	$0

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction							
Labor and G&A Expense							
TOTALS	$0	$0	$0	$0	$0	$0	**$2,070,518**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:
Based on engineering estimate and estimate from bin and conveyor manufacturers.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
	100.0%		29%

Tapia Duct Bank Infrastructure Upgrade

60006

Job Number: 10611	**Priority:** 2
Responsible Division: Electrical / Instrumentation	**Program:** No
FY Originated: FY 16-17	**Project Status:** Delete

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Add new duct bank from the front gate to the chemical building with several intercept points along the way.

INTEGRATED INTO 10619: SUMMER SEASON TMDL COMPLIANCE

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$160,000
Project Expense (through 1/31/2019):	$0
Anticipated Project Expense (2/1/2019 - 6/30/2019):	
Anticipated Carryover:	$160,000

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction							
Labor and G&A Expense							
TOTALS	$0	$0	$0	$0	$0	$0	**$0**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Staff estimate.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement 100.0%	RW Replacement	TSD 29%

Summer Season 2013 TMDL Compliance

60048

Job Number: 10619	**Priority:** 1
Responsible Division: Water Reclamation	**Program:** No
FY Originated: FY 16-17	**Project Status:** On-going

Business Value:
Protection of Public Health and Environment

Key Standard:
Meet or Exceed Environmental Regulations

Scope of Work:
In February 2017 the SWRCB adopted the Implementation Plan for the 2013 TMDL. The plan provides for compliance with summer time limits within five years. The options for compliance include a "side stream" treatment plant, the use of potable water and nutrient trading in the watershed. This CIP funds the selection, preliminary studies, outreach, CEQA analysis, preliminary design and final design for summer time compliance. Project 10611 (Duct Bank Infrastructure Upgrade) was added to this program for the FY19-20 planning period.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$640,000
Project Expense (through 1/31/2019):	$137,985
Anticipated Project Expense (2/1/2019 - 6/30/2019):	
Anticipated Carryover:	$502,015

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design	$200,000					$200,000	
Bidding	$2,000					$2,000	
Construction	$1,000,000	$1,200,000				$2,200,000	
Labor and G&A Expense	$110,000	$132,000				$242,000	
TOTALS	$1,312,000	$1,332,000	$0	$0	$0	$2,644,000	**$2,781,985**

APPROPRIATION REQUEST: $809,985

Basis for Project Cost Estimate:

Cost estimate based upon 2018 Preliminary Design Report completed by Stantec.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
	100.0%		29%

Process Air Improvements

99910

Job Number: 10626	**Priority:** 3
Responsible Division: Technical Services	**Program:** No
FY Originated: FY12-13	**Project Status:** On-going

Business Value:
Innovative and Efficient Operations

Key Standard:
Invest in Efficiency Improvements

Scope of Work:
Replaces process air blowers and aeration diffusers with new "full floor" retrievable diffusers and three new more efficient blowers. Structural and mechanical modifications for the installation of the blowers and diffusers are included in the scope of this work.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$5,729,710
Project Expense (through 1/31/2019):	$569,575
Anticipated Project Expense (2/1/2019 - 6/30/2019):	$200,000
Anticipated Carryover:	$4,960,135

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design	$175,920					$175,920	
Bidding							
Construction	$4,567,762					$4,567,762	
Labor and G&A Expense	$216,453					$216,453	
TOTALS	$4,960,135	$0	$0	$0	$0	$4,960,135	**$5,729,710**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Cost estimate is based on bid results for construction & equipment purchases specific to this project.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
	100.0%		29%

Canyon Oaks Park RW Main Extension

10602

Job Number: 10629	**Priority:** 2
Responsible Division: Technical Services	**Program:** No
FY Originated: FY 16-17	**Project Status:** On-going

Business Value:
Maximum Reuse and Resource Recovery

Key Standard:
Maximize Beneficial Use of Recycled Water

Scope of Work:
Extension to serve the City of Westlake Village's Oak Canyon Park and eliminate a long private service line to Yerba Buena School. Funding from Prop 84 IRWM 2015.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$399,780
Project Expense (through 1/31/2019):	$7,295
Anticipated Project Expense (2/1/2019 - 6/30/2019):	
Anticipated Carryover:	$392,485

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding	$2,000					$2,000	
Construction	$200,000					$200,000	
Labor and G&A Expense	$64,000					$64,000	
TOTALS	$266,000	$0	$0	$0	$0	$266,000	**$273,295**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Based on opinion of probable cost (Cannon Corporation 3/15/2018). There is potential for grant funding (proposition 84) to partially offset project cost.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
		100.0%	71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
			29%

Pure Water Project

Job Number: 10635	**Priority:** 2
Responsible Division: Administration	**Program:** No
FY Originated: FY17-18	**Project Status:** On-going

Business Value:
Maximum Reuse and Resource Recovery

Key Standard:
Maximize Beneficial Use of Recycled Water

Scope of Work:
This project funds preliminary studies, outreach, CEQA analysis, preliminary design and final design.

Preliminary work and CEQA are planned to occur during fiscal years 2019-2020 (FY19-20) and FY20-21 at an estimated cost of $6 million. Design work - estimated at $18 million - is planned for FY21-22, FY22-23, and FY23-24.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$3,667,427
Project Expense (through 1/31/2019):	$131,309
Anticipated Project Expense (2/1/2019 - 6/30/2019):	$9,061
Anticipated Carryover:	$3,527,057

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning	$3,000,000	$3,000,000	$6,000,000	$6,000,000	$6,000,000	$24,000,000	
Land Acquisition							
Design							
Bidding							
Construction							
Labor and G&A Expense							
TOTALS	$3,000,000	$3,000,000	$6,000,000	$6,000,000	$6,000,000	$24,000,000	**$24,140,370**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

- Title XVI Study: $122.6M project cost assuming site on Agoura Road (not including $2.1M for land).
- $150K in grant revenue received FY18-19 from Bureau of Reclamation for Tile XVI Study.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement 100.0%	RW Replacement	TSD 29%

Pure Water Project - Mixing and Dilution Study

Job Number: 10636	**Priority:** 2
Responsible Division: Administration	**Program:** No
FY Originated: FY17-18	**Project Status:** Complete

Business Value:
Maximum Reuse and Resource Recovery

Key Standard:
Maximize Beneficial Use of Recycled Water

Scope of Work:
Dilution and mixing study.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$389,186
Project Expense (through 1/31/2019):	$333,277
Anticipated Project Expense (2/1/2019 - 6/30/2019):	$52,582
Anticipated Carryover:	$3,327

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction							
Labor and G&A Expense							
TOTALS	$0	$0	$0	$0	$0	$0	**$385,859**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Actual costs and expected completion of agreement for study.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
	100.0%		29%

Pure Water Demonstration Project

Job Number: 10638	**Priority:** 2
Responsible Division: Administration	**Program:** No
FY Originated: FY17-18	**Project Status:** On-going

Business Value:
Maximum Reuse and Resource Recovery

Key Standard:
Maximize Beneficial Use of Recycled Water

Scope of Work:
Develop working prototype of JPA Pure Water Project.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$1,512,610
Project Expense (through 1/31/2019):	$386,215
Anticipated Project Expense (2/1/2019 - 6/30/2019):	$235,554
Anticipated Carryover:	$890,841

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design	$450,000					$450,000	
Bidding							
Construction	$2,200,000					$2,200,000	
Labor and G&A Expense	$242,000					$242,000	
TOTALS	$2,892,000	$0	$0	$0	$0	$2,892,000	**$3,513,769**

APPROPRIATION REQUEST: $2,001,159

Basis for Project Cost Estimate:

Anticipated grant revenue:
Bureau of Reclamation: $300,000
CA Coastal Commission: $800,000

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement 100.0%	RW Replacement	TSD 29%

Tapia Rehab FY17-18

Job Number: 10653	**Priority:** 2
Responsible Division: Technical Services	**Program:** No
FY Originated: FY16-17	**Project Status:** On-going

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Combine projects 10647, 10648, 10649 for ease of administration of the projects.

- Concrete repair and installation of coatings;
- Replace ten RAS gates;
- Replace grit piping and grit valves as well as primary skimming pipe.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$2,105,700
Project Expense (through 1/31/2019):	$1,187,923
Anticipated Project Expense (2/1/2019 - 6/30/2019):	$917,777
Anticipated Carryover:	$0

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction							
Labor and G&A Expense							
TOTALS	$0	$0	$0	$0	$0	$0	**$2,105,700**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Completion expected by April 2019.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
	100.0%		29%

Tapia Sluice Gate and Drive Replacement - FY 17-18

Job Number: 10658	**Priority:** 2
Responsible Division: Technical Services	**Program:** Yes
FY Originated: FY 16-17	**Project Status:** Proposed

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Replace existing gates in the tanks and channels at Tapia as well as drive mechanisms for flights and chains.

Replace ten (1) RAS gates in FY 17-18 and Ten (10) RAS gates in FY 18-19.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$556,600
Project Expense (through 1/31/2019):	$0
Anticipated Project Expense (2/1/2019 - 6/30/2019):	
Anticipated Carryover:	$556,600

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction	$212,800					$212,800	
Labor and G&A Expense	$0						
TOTALS	$212,800	$0	$0	$0	$0	$212,800	**$212,800**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Based on manufacture's cost of $16,000 per gate plus materials and labor for installation.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement 100.0%	RW Replacement	TSD 29%

A/B Bus Electrical Modification

Job Number: 10661	**Priority:** 3
Responsible Division: Electrical / Instrumentation	**Program:** No
FY Originated: FY 15-16	**Project Status:** Proposed

Business Value:
Innovative and Efficient Operations

Key Standard:
Invest in Efficiency Improvements

Scope of Work:
Study the feasibility of reconfiguring the Tapia electrical switch gear and then hire electrical team to make the modifications.

Construction cost estimates will be developed following the completion of the feasibility study.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$100,000
Project Expense (through 1/31/2019):	$0
Anticipated Project Expense (2/1/2019 - 6/30/2019):	
Anticipated Carryover:	$100,000

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction							
Labor and G&A Expense							
TOTALS	$0	$0	$0	$0	$0	$0	**$0**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Staff estimate for study only. Construction cost estimate will be developed following the completion of the feasibility study.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
	100.0%		29%

Cordillera Tank Rehab

Job Number: 10665	**Priority:** 2
Responsible Division: Technical Services	**Program:** No
FY Originated: FY17-18	**Project Status:** On-going

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Rehabilitation of Cordillera Tank including interior and exterior coating, valve and appurtenance upgrades and replacements, restoration of deteriorated asphalt, and work to ensure up-to-date compliance for safety and water quality equipment.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$1,201,267
Project Expense (through 1/31/2019):	$40,203
Anticipated Project Expense (2/1/2019 - 6/30/2019):	$10,000
Anticipated Carryover:	$1,151,064

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction	$1,050,000					$1,050,000	
Labor and G&A Expense	$101,064					$101,064	
TOTALS	$1,151,064	$0	$0	$0	$0	$1,151,064	**$1,201,267**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement	RW Replacement 100.0%	TSD 29%

Calabasas Park Recycled Water Main Extension

Job Number: 10666	**Priority:** 2
Responsible Division: Technical Services	**Program:** No
FY Originated: FY17-18	**Project Status:** On-going

Business Value:
Maximum Reuse and Resource Recovery

Key Standard:
Maximize Beneficial Use of Recycled Water

Scope of Work:
Install approximately 1,200 linear feet of 6-8 inch pipeline to loop the existing recycled water system.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$320,000
Project Expense (through 1/31/2019):	$0
Anticipated Project Expense (2/1/2019 - 6/30/2019):	
Anticipated Carryover:	$320,000

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction							
Labor and G&A Expense							
TOTALS	$0	$0	$0	$0	$0	$0	**$0**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
		100.0%	29%

Tapia Headworks White Room

Job Number: 10667	**Priority:** 2
Responsible Division: Water Reclamation	**Program:** No
FY Originated: FY17-18	**Project Status:** On-going

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Modification or replacement is needed for the floor plates and steel framing floor plate supports in the white room located at Tapia's headworks building.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$55,000
Project Expense (through 1/31/2019):	$25,223
Anticipated Project Expense (2/1/2019 - 6/30/2019):	$20,000
Anticipated Carryover:	$9,777

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design	$5,000					$5,000	
Bidding							
Construction	$274,407					$274,407	
Labor and G&A Expense	$87,810					$87,810	
TOTALS	$367,217	$0	$0	$0	$0	$367,217	**$412,440**

APPROPRIATION REQUEST: $357,440

Basis for Project Cost Estimate:

Estimate from Pace, March 2014.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
	100.0%		29%

Rancho Las Virgenes Storm Water Diversion Structure Replacement

Job Number: 10668	**Priority:** 1
Responsible Division: Water Reclamation	**Program:** No
FY Originated: FY17-18	**Project Status:** On-going

Business Value:
Protection of Public Health and Environment

Key Standard:
Meet or Exceed Environmental Regulations

Scope of Work:
Replacement of two storm water diversion structures at the Rancho Las Virgenes Composting Facility. Icnrease the size and length of the farm field discharge pipeline.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$30,000
Project Expense (through 1/31/2019):	$2,167
Anticipated Project Expense (2/1/2019 - 6/30/2019):	$0
Anticipated Carryover:	$27,833

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction	$30,000					$30,000	
Labor and G&A Expense	$9,600					$9,600	
TOTALS	$39,600	$0	$0	$0	$0	$39,600	**$41,767**

APPROPRIATION REQUEST: $11,767

Basis for Project Cost Estimate:

Engineer's estimate, 2019.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
	100.0%		29%

Develop Tour Seating Area at Tapia

Job Number: 10669	**Priority:** 3
Responsible Division: Administration	**Program:** No
FY Originated: FY17-18	**Project Status:** On-going

Business Value:
Protection of Public Health and Environment

Key Standard:
Effective Watershed Leader and Environmental Steward

Scope of Work:
Develop tour seating area at Tapia adjacent to the control building.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$25,000
Project Expense (through 1/31/2019):	$0
Anticipated Project Expense (2/1/2019 - 6/30/2019):	
Anticipated Carryover:	$25,000

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction							
Labor and G&A Expense							
TOTALS	$0	$0	$0	$0	$0	$0	**$0**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
	100.0%		29%

Centrate 24" Valve Replacement

Job Number: 10670	**Priority:** 2
Responsible Division: Facilities Maintenance	**Program:** No
FY Originated: FY17-18	**Project Status:** On-going

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Replace two (2) buried 24-inch Miliken valves at the centrate facility.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$150,000
Project Expense (through 1/31/2019):	$0
Anticipated Project Expense (2/1/2019 - 6/30/2019):	$0
Anticipated Carryover:	$150,000

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction	$200,000					$200,000	
Labor and G&A Expense	$64,000					$64,000	
TOTALS	$264,000	$0	$0	$0	$0	$264,000	**$264,000**

APPROPRIATION REQUEST: $114,000

Basis for Project Cost Estimate:

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
	100.0%		29%

Rancho Las Virgenes Digester Cleaning and Repair

Job Number: 10680	**Priority:** 2
Responsible Division: Technical Services	**Program:** No
FY Originated: FY17-18	**Project Status:** On-going

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Clean out and make all necessary repairs to digester number 2. The scope of repairs is based on the recently completed rehabilitation of digester number 1.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$533,694
Project Expense (through 1/31/2019):	$41,904
Anticipated Project Expense (2/1/2019 - 6/30/2019):	$396,000
Anticipated Carryover:	$95,790

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction	$1,504,389					$1,504,389	
Labor and G&A Expense	$165,483					$165,483	
TOTALS	$1,669,872	$0	$0	$0	$0	$1,669,872	**$2,107,776**

APPROPRIATION REQUEST: $1,574,082

Basis for Project Cost Estimate:

Cost estimate based on recently completed digester number 1. Cleaning costs are from bid amount awarded 1/7/2019. Appropriation of $225K was increased by $308,694 at January 7, 2019 JPA Board meeting.

FY19-20 construction costs based on digester No. 1 (#10565) actual rehabilitation costs.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement 100.0%	RW Replacement	TSD 29%

Rancho Las Virgenes: FOG Receiving Facilities

Job Number: 10682	**Priority:** 3
Responsible Division: Water Reclamation	**Program:** No
FY Originated: FY17-18	**Project Status:** On-Hold

Business Value:
Innovative and Efficient Operations

Key Standard:
Use Proven Technologies to Increase Efficiency

Scope of Work:
To conduct a study to determine the market for local high strength wastes (food wastes, fats, oils and grease (FOG)) that can be fed into the third digester. After completion of the study, the installation of facilities for receiving and conveying fats, oils and grease (FOG) and food waste into the newly constructed third digester.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$30,000
Project Expense (through 1/31/2019):	$0
Anticipated Project Expense (2/1/2019 - 6/30/2019):	
Anticipated Carryover:	$30,000

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction			$642,000			$642,000	
Labor and G&A Expense			**$70,000**			$70,000	
TOTALS	$0	$0	$712,000	$0	$0	$712,000	**$712,000**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
	100.0%		29%

Rancho Lighting Efficiency Upgrade

60024

Job Number: 10687	**Priority:** 3
Responsible Division: Technical Services	**Program:** No
FY Originated: FY 16-17	**Project Status:** On-going

Business Value:
Innovative and Efficient Operations

Key Standard:
Invest in Efficiency Improvements

Scope of Work:
Rancho Lighting Efficiency Upgrade

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$362,968
Project Expense (through 1/31/2019):	$276,867
Anticipated Project Expense (2/1/2019 - 6/30/2019):	
Anticipated Carryover:	$86,101

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction							
Labor and G&A Expense							
TOTALS	$0	$0	$0	$0	$0	$0	**$276,867**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

The Energy Network preliminary estimate in December 2015. Zero design cost estimate assumes NJPA awarded contract.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement 100.0%	RW Replacement	TSD 29%

Rancho Solar Generation Project - Phase II

Job Number: 10688	**Priority:** 2
Responsible Division: Technical Services	**Program:** No
FY Originated: FY18-19	**Project Status:** On-going

Business Value:
Innovative and Efficient Operations

Key Standard:
Invest in Efficiency Improvements

Scope of Work:
Service agreement for wholesale distribution service and Rule 21 Generator Interconnection Agreement reimbursable expense for an interconnection facility.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:	$398,556
Project Expense (through 1/31/2019):	$0
Anticipated Project Expense (2/1/2019 - 6/30/2019):	$398,556
Anticipated Carryover:	$0

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction	$150,000					$150,000	
Labor and G&A Expense	$48,000					$48,000	
TOTALS	$198,000	$0	$0	$0	$0	$198,000	**$596,556**

APPROPRIATION REQUEST: $198,000

Basis for Project Cost Estimate:

Reimbursement of $105,000 will be provided by solar provider before project completion (by end of calendar year 2019).

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
	100.0%		29%

Tapia Effluent Pump Station 4160 Volt Feeder Relocation

Job Number: 201808	**Priority:**
Responsible Division: Electrical / Instrumentation	**Program:** No
FY Originated: FY17-18	**Project Status:** Proposed

Business Value:
Protection of Public Health and Environment

Key Standard:
Safe and Reliable Wastewater Services

Scope of Work:
Remove or abandon in place existing 4160 volt feeders currently suspended from the top slab of the Effluent Pump Station wet well, underneath the existing MCCs. Perform electrical design and replace the overhead 4160 volt feeders. Ensure coordination with 480 volt switch gear improvements.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:
Project Expense (through 1/31/2019):
Anticipated Project Expense (2/1/2019 - 6/30/2019):
Anticipated Carryover:

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction	$75,758					$75,758	
Labor and G&A Expense	$24,242					$24,242	
TOTALS	$100,000	$0	$0	$0	$0	$100,000	**$100,000**

APPROPRIATION REQUEST: $100,000

Basis for Project Cost Estimate:

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement 100.0%	RW Replacement	TSD 29%

Tapia Tertiary Filter Rehabilitation

Job Number: 201810	**Priority:** 2
Responsible Division: Water Reclamation	**Program:** No
FY Originated: FY17-18	**Project Status:** Proposed

Business Value:
Protection of Public Health and Environment

Key Standard:
Safe and Reliable Wastewater Services

Scope of Work:

Tertiary Filters concrete rehabilitation. Approximately 25 locations that require a 1 square foot patching with rebar repair. Replace 45 metal plates (2' X 4') on the filter deck and fix concrete around the plates with proper joint sealer. Also include the repair of an electrical panel in the Filter gallery. Replace existing electric actuators at filter structure with new electric actuators. Program plant control system to function with both remote PLC control of actuators and local actuator control. Upgrade local controls to replace old filter annunciator panels which are currently located on the top deck of the filter structure.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:
Project Expense (through 1/31/2019):
Anticipated Project Expense (2/1/2019 - 6/30/2019):
Anticipated Carryover:

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction	$45,000	$412,000				$457,000	
Labor and G&A Expense	$15,000	$131,000				$146,000	
TOTALS	$60,000	$543,000	$0	$0	$0	$603,000	**$603,000**

APPROPRIATION REQUEST: $60,000

Basis for Project Cost Estimate:

Cost estimate based on 2018 KEH report.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
	100.0%		29%

Tapia Building Access Control

Job Number: 201814	**Priority:** 1
Responsible Division: Electrical / Instrumentation	**Program:** No
FY Originated: FY18-18	**Project Status:** Complete

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Add FOB access control system to the current building alarm system.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:
Project Expense (through 1/31/2019):
Anticipated Project Expense (2/1/2019 - 6/30/2019):
Anticipated Carryover:

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction	$0					$0	
Labor and G&A Expense							
TOTALS	$0	$0	$0	$0	$0	$0	**$0**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement 100.0%	RW Replacement	TSD 29%

Grit Chamber Mixing System Replacement

Job Number: 60030	**Priority:** 3
Responsible Division: Technical Services	**Program:** No
FY Originated: FY 16-17	**Project Status:** Proposed

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Replace grit chamber mixing system with a more efficient mixing system.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:
Project Expense (through 1/31/2019):
Anticipated Project Expense (2/1/2019 - 6/30/2019):
Anticipated Carryover:

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding		$1,000				$1,000	
Construction		$100,000				$100,000	
Labor and G&A Expense		$32,000				$32,000	
TOTALS	$0	$133,000	$0	$0	$0	$133,000	**$133,000**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Cost estimate based upon 2018 KEH report.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
	100.0%		29%

New RAS Wet Well and Pumps

Job Number: 60031	**Priority:** 2
Responsible Division: Technical Services	**Program:** No
FY Originated: FY 16-17	**Project Status:** Proposed

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Replace RAS wet well and pumps to increase pumping capacity and reliability.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:
Project Expense (through 1/31/2019):
Anticipated Project Expense (2/1/2019 - 6/30/2019):
Anticipated Carryover:

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design		$100,000				$100,000	
Bidding		$10,000				$10,000	
Construction		$1,000,000				$1,000,000	
Labor and G&A Expense		$110,000				$110,000	
TOTALS	$0	$1,220,000	$0	$0	$0	$1,220,000	**$1,220,000**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Cost estimate based upon 2018 KEH report.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement 100.0%	RW Replacement	TSD 29%

Pavement Restoration Tapia

Job Number: 60032	**Priority:** 3
Responsible Division: Technical Services	**Program:** No
FY Originated: FY 16-17	**Project Status:** Proposed

Business Value:

Key Standard:

Scope of Work:
Pavement restoration/slurry seal at Tapia.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:
Project Expense (through 1/31/2019):
Anticipated Project Expense (2/1/2019 - 6/30/2019):
Anticipated Carryover:

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding			$3,000			$3,000	
Construction			$325,000			$325,000	
Labor and G&A Expense			$104,000			$104,000	
TOTALS	$0	$0	$432,000	$0	$0	$432,000	**$432,000**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Staff estimate.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
	100.0%		29%

Pavement Restoration Rancho

Job Number: 60033	**Priority:** 3
Responsible Division: Water Reclamation	**Program:** No
FY Originated: FY 16-17	**Project Status:** Proposed

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Pavement restoration/slurry seal at Rancho.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:
Project Expense (through 1/31/2019):
Anticipated Project Expense (2/1/2019 - 6/30/2019):
Anticipated Carryover:

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction	$405,000					$405,000	
Labor and G&A Expense	$128,320					$128,320	
TOTALS	$533,320	$0	$0	$0	$0	$533,320	**$533,320**

APPROPRIATION REQUEST: $533,320

Basis for Project Cost Estimate:

Staff estimate.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement 100.0%	RW Replacement	TSD 29%

Rancho Reliability Improvements: FY 20-21 through FY 23-24

Job Number: 70003	**Priority:** 2
Responsible Division: Water Reclamation	**Program:** Yes
FY Originated: FY 17-18	**Project Status:** Proposed

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Replace or rehabilitate facilities and equipment at the Rancho facility based on failure, exceedence of useful life, or obsolescence. Specific projects are identified for each fiscal year.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:
Project Expense (through 1/31/2019):
Anticipated Project Expense (2/1/2019 - 6/30/2019):
Anticipated Carryover:

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction		$100,000	$100,000	$100,000	$100,000	$400,000	
Labor and G&A Expense		$32,000	$32,000	$32,000	$32,000	$128,000	
TOTALS	$0	$132,000	$132,000	$132,000	$132,000	$528,000	**$528,000**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement 100.0%	RW Replacement	TSD 29%

Tapia Water Reclamation Facility Reliability Improvements: FY20-21 Thru FY23-24

Job Number: 70008	**Priority:** 3
Responsible Division:	**Program:** Yes
FY Originated: FY 16-17	**Project Status:** Proposed

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Based on an analysis of break history, facility age, pipe material, location, and other distribution system indictors, this project will fund specific repair and/or replacement projects.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:
Project Expense (through 1/31/2019):
Anticipated Project Expense (2/1/2019 - 6/30/2019):
Anticipated Carryover:

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction		$100,000	$100,000	$100,000	$100,000	$400,000	
Labor and G&A Expense		$32,000	$32,000	$32,000	$32,000	$128,000	
TOTALS	$0	$132,000	$132,000	$132,000	$132,000	$528,000	**$528,000**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement 100.0%	RW Replacement	TSD 29%

Rancho Reliability Improvements FY 19-20

Job Number: 70014	**Priority:** 2
Responsible Division: Water Reclamation	**Program:** Yes
FY Originated: FY 18-19	**Project Status:** Proposed

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Replace or rehabilitate facilities and equipment at the Rancho facility based on failure, exceedence of useful life, or obsolescence. Specific projects are identified for each fiscal year.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:
Project Expense (through 1/31/2019):
Anticipated Project Expense (2/1/2019 - 6/30/2019):
Anticipated Carryover:

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction	$100,000					$100,000	
Labor and G&A Expense	$0						
TOTALS	$100,000	$0	$0	$0	$0	$100,000	**$100,000**

APPROPRIATION REQUEST: $100,000

Basis for Project Cost Estimate:

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
	100.0%		29%

Tapia Water Reclamation Facility Reliability Improvements - FY19-20

Job Number: 70015	**Priority:** 2
Responsible Division:	**Program:** Yes
FY Originated: FY 18-19	**Project Status:** Proposed

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Replace or rehabilitate facilities and equipment at the Tapia Water Reclamation facility based on failure, end of useful life, or obsolescence. Specific projects are identified for each fiscal year.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:
Project Expense (through 1/31/2019):
Anticipated Project Expense (2/1/2019 - 6/30/2019):
Anticipated Carryover:

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction	$100,000					$100,000	
Labor and G&A Expense	$0						
TOTALS	$100,000	$0	$0	$0	$0	$100,000	**$100,000**

APPROPRIATION REQUEST: $100,000

Basis for Project Cost Estimate:

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement 100.0%	RW Replacement	TSD 29%

Centrate Tank Inspection and Rehabilitation Assessment

Job Number: 70019	**Priority:** 2
Responsible Division: Technical Services	**Program:** No
FY Originated: FY17-18	**Project Status:** Proposed

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Tank inspection and recommendations for rehabilitation.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:
Project Expense (through 1/31/2019):
Anticipated Project Expense (2/1/2019 - 6/30/2019):
Anticipated Carryover:

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning		$10,000				$10,000	
Land Acquisition							
Design							
Bidding							
Construction							
Labor and G&A Expense							
TOTALS	$0	$10,000	$0	$0	$0	$10,000	**$10,000**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
	100.0%		29%

Rancho Fire Repair - Woolsey Fire

Job Number: 70025	**Priority:** 2
Responsible Division: Technical Services	**Program:** No
FY Originated: FY19-19	**Project Status:** Proposed

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Repair compost and cure building, fire damaged windows and roofing, mechanical equipment, irrigation system, electrical, architectural facade, biofilter and other damaged items.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:
Project Expense (through 1/31/2019):
Anticipated Project Expense (2/1/2019 - 6/30/2019):
Anticipated Carryover:

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction	$1,750,000					$1,750,000	
Labor and G&A Expense	$192,500					$192,500	
TOTALS	$1,942,500	$0	$0	$0	$0	$1,942,500	**$1,942,500**

APPROPRIATION REQUEST: $1,942,500

Basis for Project Cost Estimate:

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement 100.0%	RW Replacement	TSD 29%

JPA Facility Facilities Repair - Woolsey Fire

Job Number: 70030	**Priority:** 2
Responsible Division: Technical Services	**Program:** No
FY Originated: FY18-19	**Project Status:** Proposed

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Repair JPA owned fire damaged facilities, property and equipment. Damage includes irrigation systems at Rancho and Reservoir 2, and miscellaneous damage to remote JPA facilities.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:
Project Expense (through 1/31/2019):
Anticipated Project Expense (2/1/2019 - 6/30/2019):
Anticipated Carryover:

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction	$750,000					$750,000	
Labor and G&A Expense	$82,500					$82,500	
TOTALS	$832,500	$0	$0	$0	$0	$832,500	**$832,500**

APPROPRIATION REQUEST: $832,500

Basis for Project Cost Estimate:

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD
			71%
P/W Replacement	Sanitation Replacement	RW Replacement	TSD
	100.0%		29%

Rancho: Replace Agitators

Job Number: 80748	**Priority:** 3
Responsible Division: Technical Services	**Program:** No
FY Originated: FY10-11	**Project Status:** Proposed

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Purchase new compost agitators to replace the existing ones.

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:
Project Expense (through 1/31/2019):
Anticipated Project Expense (2/1/2019 - 6/30/2019):
Anticipated Carryover:

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction				$500,000	$500,000	$1,000,000	
Labor and G&A Expense				$55,000	$55,000	$110,000	
TOTALS	$0	$0	$0	$555,000	$555,000	$1,110,000	**$1,110,000**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Staff estimate based on previous purchases.

Fund:			% of Project Allocated by			JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation				LVMWD
0.0%	0.0%	0.0%				71%
P/W Replacement	Sanitation Replacement	RW Replacement				TSD
0.0%	100.0%	0.0%				29%

Primary Effluent Equalization

Job Number: 99972	**Priority:** 3
Responsible Division:	**Program:** No
FY Originated: FY 15-16	**Project Status:** Proposed

Business Value:
Sound Planning and Appropriate Investment

Key Standard:
Long-Term View, Appropriate CIP Funding

Scope of Work:
Design and construct 1.25 million gallons of primary effluent equalization storage. The storage will be located at the "bone yard."

Expenditures & Appropriations - Inception to Date:

Approved Appropriation:
Project Expense (through 1/31/2019):
Anticipated Project Expense (2/1/2019 - 6/30/2019):
Anticipated Carryover:

Proposed Project Expenditures:

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	5-Year Total	Total Project (projected)
Planning							
Land Acquisition							
Design							
Bidding							
Construction		$375,000	$2,204,000	$2,200,000		$4,779,000	
Labor and G&A Expense		$115,000	**$242,000**	$242,000		$599,000	
TOTALS	$0	$490,000	$2,446,000	$2,442,000	$0	$5,378,000	**$5,378,000**

APPROPRIATION REQUEST: $0

Basis for Project Cost Estimate:

Hazen-Sawyer 2015 Report.

Fund:	% of Project Allocated by		JPA Partner:
P/W Construction	Sanitation Construction	RW Conservation	LVMWD 71%
P/W Replacement	Sanitation Replacement 100.0%	RW Replacement	TSD 29%